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1852
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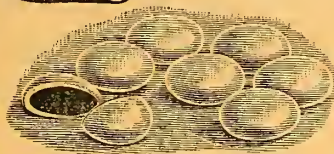
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Exchange Column, p. 12. Advertisers and Buyers' Reference List and Index to Advertisements, pp. 27-29.

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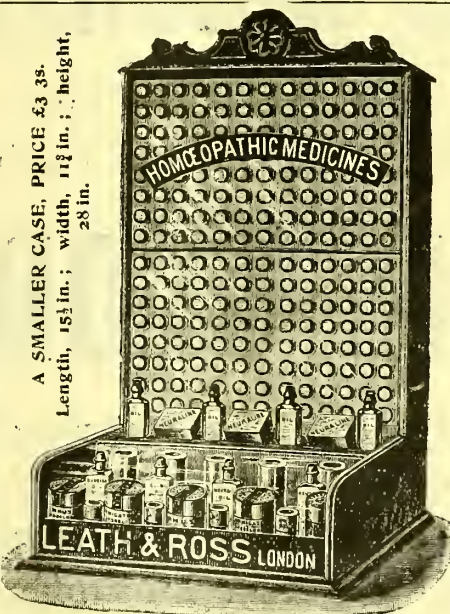
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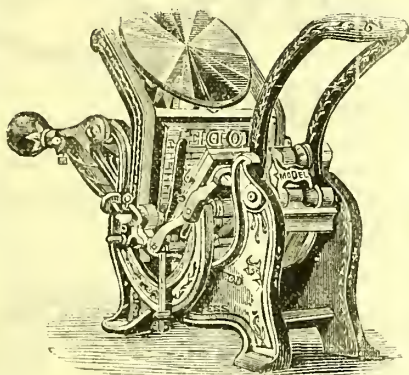
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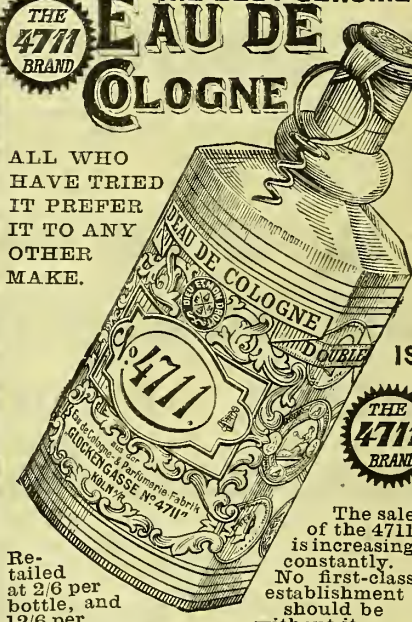
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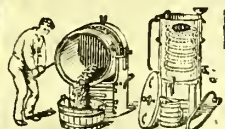


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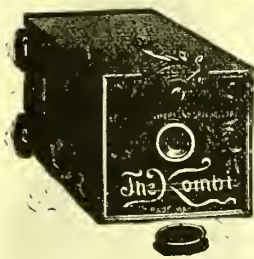
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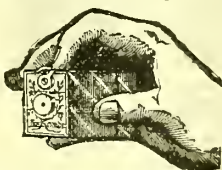
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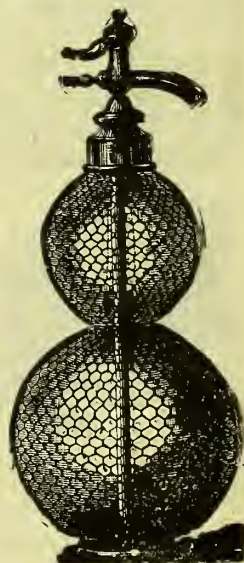
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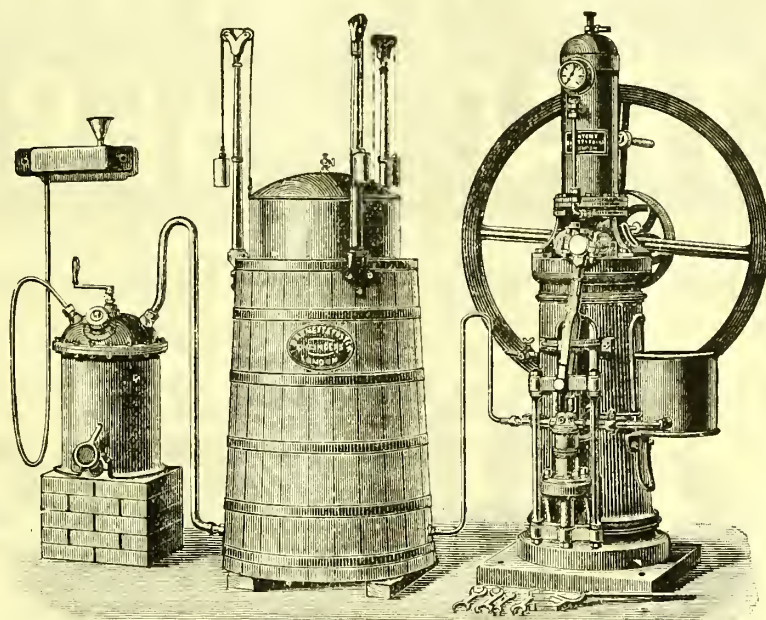
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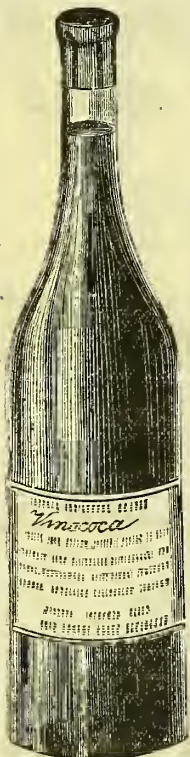
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**LEMONADE.**

**Q**UININE is universally accepted as the Best Preventive during epidemics of Influenza, and is generally prescribed by the Medical Profession for this disease.

This Lemonade contains Quinine, is a pleasant and palatable beverage, and may be taken daily as an ordinary Lemonade.

In Syphons, 3/- per dozen.

In Bottles, 1/3 per dozen.

PREPARED BY THE

**Chemists' Aerated & Mineral Waters Association**

**"CAMWAL,"** LIMITED,

LONDON, BRISTOL, HARROGATE, AND MITCHAM.





# THE PASTEUR GERM FILTER.

The PASTEUR FILTER prevents the passage of Microbes of any kind, is difficult to break and easy to clear, and is effectual in preventing Epidemics of Cholera, Typhoid Fever, Diarrhoea, and similar diseases.

*The British Medical Journal* (August 25, 1894) says:—"Its application for some years in 200,000 quarters of the French Army has shown that it is effectual in preventing epidemics of Cholera, Typhoid Fever, Diarrhoea, and similar diseases."

M. de Freycinet (Report of Minister of War to President of the French Republic, *Journal Officiel*, February 14, 1892) says:—"Wherever the Pasteur Filter has been applied to water previously bad, Typhoid Fever has disappeared." At this date over 200,000 quarters of the French Army were fitted with Pasteur Filters.

Sir Henry E. Roscoe, M.P., Ph.D., F.R.S. (*Westminster Gazette*, September 8, 1893), says:—"Ordinary filters are no good at all. The only filter that protects the water-drinker from the germs is the Pasteur Filter."

After eight months' investigation in the Public Health Laboratory of the University of Edinburgh to estimate the value, in prevention of disease, of the best known Carbon and Asbestos Filters, of the Pasteur Filter, and of a copy of it in another material, Dr. H. H. Johnston, D.Sc., M.D., O.M., states:—"The Pasteur-Chamberland Filter is undoubtedly the best, and the only one in which reliance can be placed for permanently sterilising drinking water."

Made in a variety of Patterns for Industrial and Domestic purposes.

**J. DEFRIES & SONS, LIMITED,**  
SANITARY DEPARTMENT, LONDON, E.C.

## THOS. GUEST & CO.

City Works, Carruthers St., MANCHESTER.

### MAKERS OF ALL DESCRIPTIONS OF MEDICATED LOZENGES.

B.P., T.H. Ph., and General Proprietary Lozenges. Finest Gum Jujubes and Pastilles—Glycerine and Black Currant, &c. Granular and all other Effervescing Preparations. Boiled Sugars, Floral Tablets (1892).

BEFORE BUYING ANY OF THE ABOVE, PLEASE SEND FOR SAMPLES AND COMPARE.

TELEPHONE NATIONAL 235. TELEGRAMS "GUESTO."

## PRINCE ALBERT'S CACHOUX



HIGHEST AWARD  
CHICAGO EXHIBITION

1893.



|                                                                                       |   |                                   |
|---------------------------------------------------------------------------------------|---|-----------------------------------|
| These Cachoux are supplied only<br>in Brass Boxes, of which there<br>are three sizes. | { | No. 4's at 3/6 doz. (Export).     |
|                                                                                       |   | No. 5's at 4/- doz. (Home Trade). |
|                                                                                       |   | No. 6's at 7/- doz. (Export).     |

All Labels, Titles, and Trade Marks registered in the United States, Canada, &c.

Manufactured by

**THOMAS JACKSON, Strangeways, MANCHESTER.**

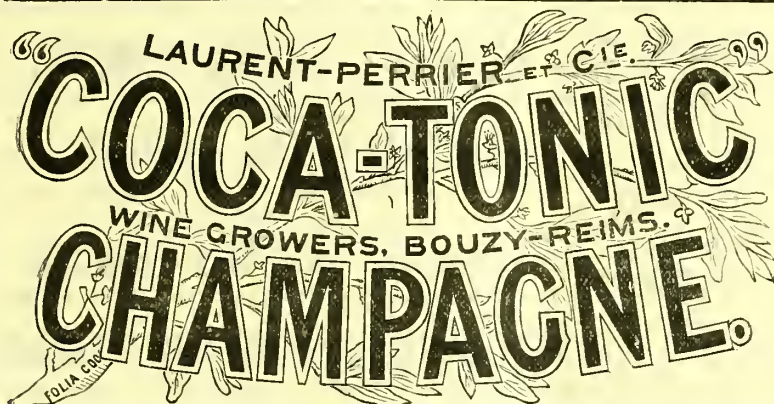


# COX'S NON-ALCOHOLIC GINGER WINE.

The above has a large sale both in bottle and on draught, no licence being needed. It is a most pure and delightful drink, either alone in winter, or mixed with aerated waters at other times. Consigned in bulk or bottle. Trade list and samples free.

**BEWARE OF IMITATIONS OF INFERIOR QUALITY.**

**COX & COMPANY,**  
178 YORK ROAD, KING'S CROSS, LONDON, N.



Sugar Free.

Carefully Standardised.

Prepared by Actual  
Champagne Growers.

Prescribed as the Best  
Restorative Tonic for  
Influenza, and in cases  
of Insomnia, Neuras-  
thenia, etc.

*In Bottles, 2/- and 3/9.*

Full Particulars of HERTZ & COLLINGWOOD, 4 SUSSEX PLACE, LONDON, E.C.

# HALL'S COCA WINE

3/6 Size - 26/- per Case (1 doz.)

2/0 Size - 30/- per Case (2 doz.)

*Can be obtained through the Wholesale Houses, or from the Proprietors,*

**STEPHEN SMITH & CO., BOW, LONDON.**

TO THE  
**CHEMISTS & DRUGGISTS**  
OF  
**GREAT BRITAIN.**

TELEGRAPHIC ADDRESS:

"WINCARNIS  
NORWICH."

*Wincarnis Works,  
Lower Westwick Street,  
NORWICH,  
December, 1887.*

The Excise Authorities having created a difficulty as to the sale of Medicated Wine containing a certain percentage of alcohol, we obtained in January last, from the Inland Revenue Authorities, permission to sell our WINCARNIS,\* or Liebig's Extract of Meat and Malt Wine, **WITH QUININE**, without a Wine Licence, and many Chemists not holding a Wine Licence have sold considerable quantities. In order further to meet the requirements of the trade, we have introduced a Liebig's Extract of Meat and Malt Wine, **NON-Alcoholic**, made from the juice of the Grape, Liebig's Extract of Meat, and Extract of Malt. This also can be **SOLD WITHOUT A WINE LICENCE**. Your orders will oblige either direct or through the Wholesale Houses

Yours obediently,

**COLEMAN & CO., LIMITED.**

*N.B.—The Wine is sold in Bottles, 2/9 and 4/6 each.  
Trade prices on application.*

**P.S.—**Under certain conditions we are willing to pay for a Licence.

**PARTICULARS ON APPLICATION.**

SOLE MANUFACTURERS—

**COLEMAN & CO., LIMITED,**  
WINCARNIS WORKS,  
Lower Westwick St., NORWICH,  
and 8 New London St., LONDON, E.C.

\* WINCARNIS is a NEW NAME, registered to prevent fraudulent imitations.

**EIGHT PRIZE MEDALS AWARDED**

**GOODALL'S  
HOUSEHOLD  
SPECIALITIES.**

**YORKSHIRE RELISH.**

Most Delicious Sauce in the World. Bottles, 6d., 1s., &amp; 2s. each.

**GOODALL'S BAKING POWDER.**

The Best in the World. 1d. packets; 6d., 1s., 2s., and 5s. Tins.

**GOODALL'S EGG POWDER.**

One 6d. Tin is equal to 25 Eggs. In 1d. packets; 6d., 1s., and 5s. Tins.

**GOODALL'S CUSTARD POWDER.**

Delicious Custards without Eggs. In Boxes, 2d., 6d., &amp; 1s. each.

**GOODALL'S BLANCMANGE POWDER**

Delicious Blancmange in a Few Minutes. Boxes, 6d. and 1s. each.

**GOODALL'S QUININE WINE, B.P.**

Best Tonic yet Introduced. Bottles, 6d., 1s., and 2s. each.

**GOODALL'S GINGER-BEER POWDER.**

Makes the Best Ginger-Beer. Packets, 3d. and 6d.

**GOODALL'S BRUNSWICK BLACK.**

For Painting Stoves, Grates, Iron, Tin, &amp;c. 6d. and 1s. Bottles.

**GOODALL'S LAVENDER WATER.**

Rich and Lasting Perfume. Bottles, 1s., 2s., and 5s. each.

**GOODALL'S PLATE POWDER.**

For Polishing and Cleaning all Metals. Boxes, 6d., 1s., and 2s.

**GOODALL'S JELLY SQUARES.**

Make a Delicious and Nutritious Jelly. In 1/2-pint, 1-pint, and Quart Boxes, 3d., 6d., and 1s. each.

PROPRIETORS—GOODALL, BACKHOUSE &amp; CO., LEEDS.

**PATENT MEDICINES  
AND  
DRUGGISTS' SUNDRIES.**

Monthly Price List of Patent Medicines, Druggists' Sundries, &c., will be sent post free on application to

**GOODALL, BACKHOUSE & CO., LEEDS.**



# PETER TYRER'S SAUCES

WORCESTER, READING, HARVIE, YORKSHIRE, AND "BOROUGH" KETCHUP

SILVER MEDAL

|                                   | Per gross. | Extra quality. |                                              | Per gross. | Extra quality. |
|-----------------------------------|------------|----------------|----------------------------------------------|------------|----------------|
| 14. Sample Bottles, dozen parcels | 5/3        | 6/3            | 4 Bottles, flat or round, reputed half-pints | 16/-       | 26/-           |
| " 1-gross boxes                   | 5/8        | 6/8            | " 1-pint                                     | 28/-       | 38/-           |
| 14. Giant " dozen parcels         | 6/-        | 8/8            | 1 Pint Imperial, round stoppered bottles     | 52/-       | 62/-           |
| " 1-gross boxes                   | 6/6        | 8/-            | 124-Gallon Casks (casks free)                | 80/-       | 92/-           |

**ROYAL CAFE SAUCE, a Rich Fruity and Exquisite Flavour.**

Square Glass Stoppered Bottles, containing nearly 1-pint Imperial, 42/- per gross. Sample Bottles at 7/- per gross.

**MANUFACTORY — 30 SOUTHALL PLACE, LONG LANE, BOROUGH, LONDON, S.E.**  
**CHIEF SCOTCH AGENCY — West Nile Street, GLASGOW.**

## NESTLÉ'S FOOD

*An entire Diet for Infants, Children, and Invalids.*

"Renders valuable assistance in Wasting Fever."  
"Beneficial as a Diet in Severe Cases of Typhoid."  
"Invaluable in Cholera Infantum."

Pamphlet containing Extracts from Standard Medical Works in which the above Testimony is given, sent free with Sample Tin on application to H. NESTLÉ, 48 Cannon Street, London, E.C.

The attention of the Medical Profession is also drawn to

## NESTLÉ'S SWISS (CONDENSED) MILK.

Which, through its RICHNESS in CREAM and UNIFORMITY of QUALITY, has obtained the Largest Sale in Great Britain. It can be used for all purposes of FRESH MILK.

Samples to Members of the Medical Profession only, sent free on application to H. Nestlé, 48 Cannon Street, London, E.C.

A PROFITABLE EXTRA.

## FINEST TEAS



DRINK  
"TARALOUVA"  
Ceylon Fannings  
TEA,

Per 1/6 lb.

Sold only in Tins.

Wholesale only: 42 MINCING LANE, LONDON, E.C.

For Wholesale Terms and Agency apply to

**PEARSE & MEEKING, Wholesale Tea Dealers,**  
42 MINCING LANE, LONDON.

## BOVRIL

THE VITAL PRINCIPLE OF PRIME OX BEEF, IS 50 TIMES MORE NOURISHING THAN ORDINARY EXTRACT OF MEAT OR HOME-MADE BEEF TEA.

BARON LEIBIG discovered and publicly avowed the unsuitableness of Meat Essences, Meat Extracts, and home-made Beef Tea as resuscitating agents or as food in any direct sense.

BOVRIL was introduced to supply the nourishment so conspicuously absent in these preparations, and this is secured by the introduction of albumen and fibrine (or rather the entire lean of beef) desiccated at a low temperature by special process, and subsequently pulverised to a minute degree of subdivision. By this means the entire nourishment of animal food is adapted to the feeblest and most sensitive stomach, and perfect assimilation is secured with the least possible expenditure of vital energy.

## INVALID BOVRIL

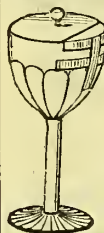
Is specially prepared for use in the Sick Room. It is put up in porcelain jars and sold by chemists and druggists only; and it differs from ordinary Bovril in being more concentrated and quite devoid of seasoning.

It is the most perfect form of concentrated nourishment at present known, and is enjoyed by Invalids when ordinary food and stimulants are rejected.

**BOVRIL, LTD., Food Specialists, LONDON.**

Chairman—RT. HON. LORD PLAYFAIR, K.C.B., LL.D.



**MOCKLER'S  
SPRING COVERS**

To Fit Teacups, Tumblers, and Jugs. For Glass and Stone Jam Pots, Preserve Jars, &c.

In 3 Sizes to fit any vessel.  
In 2 qualities.

|     |     |     |               |
|-----|-----|-----|---------------|
| 1   | 2   | 3   | 4             |
| 2½  | 3½  | 4   | 4½ inches.    |
| 7/6 | 8/- | 8/6 | 10/6 per doz. |

DUST AND FLY PROOF.

A Parliamentary Cartoon and other particulars from Sole Agents—

**"FORDHAMS,  
LONDON."**

**THE REGISTERED**

**"GEM" SQUARE**

**CLOTHES  
PEGS**

Special Purchase of  
30,000 Boxes,  
Suitable for Export.

Hard Wood. Extra Quality.

Each Box contains fully  
5 Gross, and weighs 23 lbs.

Price 1/11 per Box.

|             |      |     |
|-------------|------|-----|
| If 25 boxes | 50   | 100 |
| 1/10½       | 1/10 | 1/9 |

FREE ANY LONDON ADDRESS.

**"DEVELINE"  
WHISTLE.**

Nickel Plated.

Millions of this, the latest  
American Novelty, will sell  
during 1895.

The last new Bicycle Alarm.  
SOOTHING.

HIDEOUS,  
MELODIOUS,  
UNEARTHLY.

Retail, 1/- each. Per doz., 8/-.  
Sample by post, 10 stamps.

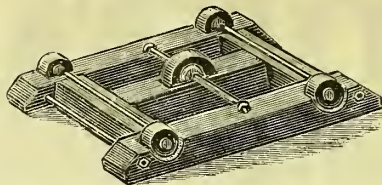
**THE  
"UNICUS"  
TEA INFUSER**  
(PATENTED.)

To make a Cup of Tea perfectly free from Tannin and other deleterious Essences, without using a Teapot.

Electroplate on Nickel Silver,  
8/6 per dozen complete.

Also at Higher Prices.

SEND FOR FULL PRICED  
LIST.

**"SAMSON" TRUCKS.**

A cheap, simple, strong, and efficient improvement for removing heavy loads from place to place. By the adaptation of the centre rotating wheel the load is readily run and steered into any desired position.

No. 1.—Extra Strong, on Six heavy iron Wheels, EACH with Centre Rotating Wheel; carrying capacity, 50 cwt.; measurement, 36 in. by 24 in. . . . 32/-  
No. 2.—For Warehouse and other purposes, with Centre Rotating Wheel; carrying capacity, 30 cwt.; measurement, 22 in. by 16 in. . . . 15/-  
No. 3.—For light bulky goods, 27 in. by 16 in.: Wood Rollers; capacity, 10 cwt. . . . 6/6

**MONKEY BRAND**

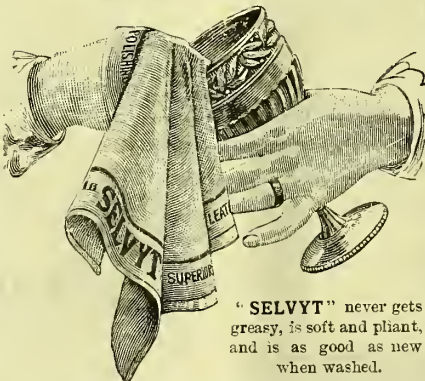
For Spring Cleaning.

|                         |    |    |      |
|-------------------------|----|----|------|
| Cases of 100 Large Bars | .. | .. | 25/- |
| Cases of 60 Large Bars  | .. | .. | 15/- |
| Boxes of 48 Half-Bars   | .. | .. | 6/3  |

FREE LONDON OR BRISTOL.

If any difficulty in obtaining in any part of the world, write Sole London Consignees—

**"FORDHAMS, LONDON."**

**"SELVYT"**  
(REGISTERED TRADE MARK.)

"SELVYT" never gets greasy, is soft and pliant, and is as good as new when washed.

The cloth is possessed of remarkable properties, imparting with ease and rapidity a brilliant and lasting polish to Silver, Gold, Glass, Metals, Furniture, Patent Leather, and everything in general use for which wash-leathers would be required. These "SELVYT" Cloths are made in the following sizes and prices:—

|                    |          |          |          |          |         |
|--------------------|----------|----------|----------|----------|---------|
| Size in Inches     | A        | B        | C        | D        | E       |
|                    | 10½ × 14 | 14 × 17½ | 14 × 17½ | 17½ × 21 | 21 × 20 |
| Net price per doz. | 2/9      | 3/11     | 5/3      | 7/11     | 9/6     |

**"Lightning" Freezers.**

This season we maintain our established reputation as leaders of all improvements in Ice Cream Freezers, and the best goods in the market, in adopting the

Electric Welded Wire Hoop Pails, the hoops of which are twice as strong as the old flat hoops, and are guaranteed not to fall off. All our pails are made of the best Virginia White Cedar. All inside parts of Freezers are thoroughly coated with Pure Block Tin.

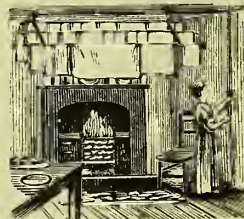
Full List upon Application.  
EVERY SIZE IN STOCK.

**THE "SIMPLEX"  
ORANGE PARERS.**

(PATENTED.)

These handy little Parers are now very popular.

|            |      |      |               |
|------------|------|------|---------------|
| Retail 2/7 | 6d.  | 1/-  | 1/3 each.     |
| Price 1/2  | 4/-  | 7/-  | 8/6 per doz.  |
| Retail 1/6 | 1/9  | 2/6  | 3/6 each.     |
| Price 12/- | 16/- | 20/- | 30/- per doz. |

**THE "BARNES"  
DRYER AND AIRER.**

We beg to call your attention to this useful invention, intended to supersede the old method of Clothes Horse or Lines, and prevent the serious accidents that so often occur. The Dryer goes close to the Ceiling, therefore the Clothes are out of the way, dry quickly, and by merely turning one of the Poles the Dryer will expand, and, if necessary, go flat, to meet the difficulty where Kitchens are low. It will last a lifetime, can be fixed in half an hour without defacing the wall or ceiling, and at any time removed in ten minutes.

**"FLY CEMETERY."**

Catch more Flies in a day than by any other way.  
Also Mather's and other Fly Papers and Catchers. Stock now ready.

W. B. FORDHAM & SONS, LIMITED, 36 TO 40 YORK ROAD, KING'S CROSS, LONDON, N.



Telephone Number, 1852.

Telegraphic Address—CHEMICUS LONDON.

## ADVERTISERS' AND BUYERS' REFERENCE LIST AND INDEX TO ADVERTISEMENTS

## INDEX TO ADVERTISEMENTS APPEARING IN THIS ISSUE.

NOTE.—The Folios shown in this Index are those at the FOOT of the Page, and not at the Top. This arrangement is necessary in order to meet the requirements of the Post Office.

| Foot of Page                                                    | Foot of Page                                         | Foot of Page                      | Foot of Page                         |
|-----------------------------------------------------------------|------------------------------------------------------|-----------------------------------|--------------------------------------|
| Advertising Balloon Co. .... 16                                 | Domen Belts Co. .... 57                              | Keene & Ashwell ..... 40          | Reynolds & Branson ..... 50          |
| Allen & Hanburys ..... Cover                                    | Dowden & Co. .... 57                                 | Kemp & Son ..... 43               | Richardson, J., & Co. (Leicester) 37 |
| Anderson & Co. .... 38                                          | Eastman's Photographic Materials Co. (Lim.) ..... 12 | Kirtley, J. C. .... 55            | Lim. .... 37                         |
| Anglo-American Drug Co. (Lim.) 44                               | Edwards & Co. .... 53                                | Kombi Camera Co. .... 17          | Robinson, B. .... 18                 |
| Apollinaris Co. .... Cover                                      | Elliman, Sons, & Co. .... Text 456                   | Komchachin Caloric ..... 55       | Rookledge, F. E. .... 58             |
| Assistants Wanted and Wanting Situations .. Coloured Supplement | Erhardt, W. .... 55                                  | Lake, Millar & Co. .... 55        | "Rypona" ..... 54                    |
| Barclay & Sons (Lim.) ..... 11                                  | Evans, Lescher & Webb ..... 43                       | Landor, Anderson & Co. .... 54    | Sanitas, The Co. (Lim.) .. Text 456  |
| Barrett & Foster ..... 19                                       | Ewan & Son ..... 16                                  | Laughland, Mackay & Co. .... 56   | Saunders Bros. .... 55               |
| Barrett, A. A. .... 54                                          | Exchange Column ..... 12                             | Leath & Ross ..... 3              | Schutze & Co. .... 51                |
| Barron, Harveys & Co. .... 36                                   | Faulding & Co. .... 5                                | Liverpool Lint Co. .... 51        | Scott & Bowne (Lim.) ..... 29        |
| Bates, F. W. .... 17                                            | Feaver, J. .... 49                                   | Liverpool School ..... 8          | Sheffield College ..... 8            |
| Beecham, T. .... 9, 46                                          | Fletcher Bros. .... 32                               | Lloyd, T. H., & Co. .... 41       | Silverlock, H. .... 10               |
| Bennett & Jenner ..... 55                                       | Fentiman, A. J. .... 54                              | Lofthouse & Saltmer ..... 36      | Singleton & Cole (Lim.) ..... 55     |
| Berdoo & Co. .... Coloured Supplement                           | Ferguson & Osborne .... Col. Supp.                   | Lorenz, H. .... 54                | Smith, B., & Co. (Lim.) ..... 23     |
| Blondeau & Co. .... 6, 7                                        | Ferris & Co. .... 39                                 | Louthen & Co. .... 54             | Snowdon, Sons & Co. .... 56          |
| Boehm, F. .... 45                                               | Fink, F., & Co. .... 54                              | Mackey, Mackey & Co. .... 40      | "Solazzi" ..... 45                   |
| Botwright & Grey ..... 57                                       | Fletcher Bros. & Co. .... 58                         | Marriott, E., & Co. .... 49       | Sozio & Andrioli ..... 15            |
| Boord & Son ..... 52                                            | Fletcher, Fletcher & Co. .... Text 456               | May & Baker (Lim.) ..... Cover    | Spurway & Co. .... 16                |
| Bovril (Limited) ..... 25                                       | Ford, Shapland & Co. .... 10                         | May, Roberts & Co. .... Cover     | Squire, P. W. .... 8                 |
| Bratby & Hinchliffe (Lim.) ..... 18                             | Fordnam & Sons (Lim.) ..... 26                       | Meister, Lucius, & Brunning .. 39 | Statham, H., & Co. .... 50           |
| Brett, F. J. .... Coloured Supplement                           | French Hygienic Society ..... 20                     | Miller, A., & Co. .... 13         | Stevens, P. A. .... 54               |
| Bronley, H., & Co. .... 45                                      | Gilbertson & Sons ..... 49                           | Model Printing Press (Lim.) .. 9  | Stevenson, H. E., & Co. .... 54      |
| Brunner, Mond & Co. (Lim.) .. 42                                | Glendinning, W., & Sons ..... 54                     | Müller, F. P. .... Text 456       | Stokes' Cheek Tilt Co. (Lim.) .. 55  |
| Burrough, J. .... 52                                            | Goodall, Backhouse & Co. .... 24                     | Morris & Callard ..... 36         | Symes & Co. (Lim.) ..... 40          |
| Burroughs, Wellcome & Co. .... 33, 34                           | Graf, F. .... 54                                     | Morrison, R., & Co. .... 40       | Tasmanian Eucalyptus Co. .... 56     |
| Burrow, W., & J. .... 17                                        | Grossmith, J., & Co. .... 15                         | Mulhens, F. .... 14               | Thiellay, E. H. .... 54              |
| Burton, W., & Sons ..... 36                                     | Guest, T., & Co. .... 22                             | Mumford, G. S. .... Text 456      | Thornston-Pickard Co. .... 54        |
| Bush, W., & J. .... 4                                           | Harrison & Waide ..... 9                             | Ness & Co. .... 54                | Tomlinson, T., & Son Col. Supplement |
| Businesses for Disposal .. Col. Supp.                           | Harrison, T. H. .... 50                              | Nestlé, H. .... 25                | Tomlinson & Hayward ..... Text 456   |
| Cadbury Bros. .... Cover                                        | Hearn, Wright, & Co. .... 48                         | Newball & Mason ..... 20          | Treath, R. C. .... 15                |
| Central School ..... 8                                          | Heaton, Squire & Francis ..... 34                    | Newsome, C. .... 50               | Treble, G., & Son ..... 9            |
| Chemists' Aerated and Mineral Water Association (Lim.) ..... 21 | Hebden, W. C. .... 50                                | Norton & Co. .... 40              | Truett, H. P. (Lim.) ..... 14        |
| Christy, T., & Co. .... 54                                      | Hermanine ..... 46                                   | Nortons (Lim.) ..... 46           | Tyrer, P. .... 25                    |
| City School of Chemistry ..... 8                                | Hertz & Hollingwood ..... 23                         | Odum's Chemical Co. (Lim.) .. 51  | Tyrer, T., & Co. .... 38             |
| Coleman & Co. (Lim.) ..... 24                                   | Hooper, B., & Co. .... 38                            | Oppenheimer, Sons & Co. (Lim.) 53 | United Alkali Co. (Lim.) ..... 11    |
| Cow & Co. .... 50                                               | Howard & Co. .... 52                                 | Palmer & Co. (Lim.) ..... 52      | Vaccine Association ..... 44         |
| Cooper & Co. .... 45                                            | Incandescent Gas Light ..... 52                      | Pasteur Germ Filter ..... 25      | Van Oppen & Co. .... 16              |
| Cox & Co. .... 23                                               | Isaacs & Co. .... 48                                 | Pears, A. & F. (Lim.) ..... 35    | Walker, Troke & Co. .... 44          |
| Crawshaw, E., & Co. .... 11                                     | "Izal" ..... 58                                      | Pearse & Meeking ..... 25         | Watson & Wates ..... 55              |
| Crocker & Co. Coloured Supplement                               | Jacks, T. .... 46                                    | Peterson, M., & Co. .... 55       | Wegman, J., & W. .... 46             |
| Dakin Bros. .... 55                                             | Jackson, T. .... 22                                  | Potter & Clarke ..... 59          | Wills & Wootton ..... 8              |
| Davenport, J. .... 47                                           | Jeyes' Sanitary Co. (Lim.) ..... 30                  | Quelch, H. C. .... 51             | Wilson, A. .... 16                   |
| Derooy Fils Aine ..... 17                                       | Johnsen & Jørgensen ..... 48                         | Raines, Clark & Co. .... 39       | Wyeth, Jno., & Bro. .... 13          |
|                                                                 | Jones & Co. .... 52                                  | Ransom, W., & Son ..... 14        | Yanaka ..... 55                      |
|                                                                 |                                                      | Raphael & Co. .... 9              | Yardley & Co. (Lim.) ..... 14        |
|                                                                 |                                                      |                                   | Youldon, E. .... 48                  |

## CLASSIFIED LIST OF ALL ADVERTISERS

Whose Announcements appear in "THE CHEMIST AND DRUGGIST." Those whose Names do not appear in the preceding Index are published in one of the other issues of this month.

|                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                      |
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| <b>ACETIC ACID</b><br>Lorenz, H.<br>Morris & Callard (Salts)                                                                                                                                                                                                      | <b>BAKING POWDER</b><br>Goodall, Backhouse & Co.                                                                                                                                                                                                                                                        | <b>BOTTLES</b><br>Ayrton & Saunders<br>Barnett & Foster<br>Barrett, K. H.<br>Bratby & Hinchliffe, Lim.<br>Evans, Sons & Co.<br>Gilbertson, H., & Sons<br>Hearn, Wright & Co.<br>Isaacs & Co.<br>Johnsen & Jørgensen<br>Kilner Bros.<br>Lofoden Cod Liver Oil Co.<br>Maw, S., Son & Thompson<br>Potts, H., & Co.<br>Rylands, Dan, Lim.<br>Stipendium Stopper Co., Lim.<br>Taylor, F. H., & Co.<br>Tidman & Son<br>Toogood, W.   Youldon, E. | <b>CAMPHOR</b><br>Howards & Sons<br>May & Baker, Lim.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>CHEST PROTECTORS</b><br>Ayrton & Saunders<br>Hockin, Wilson & Co.<br>Liverpool Patent Lint Co.<br>Maw, S., Son & Thompson<br>Newbery, F., & Sons<br>Schutze & Co.   Solport Bros<br>Wood, Vincent |
| <b>ACIDS</b><br>Boulton J., & Co., Lim.                                                                                                                                                                                                                           | <b>BANDAGES</b><br>Bailey, W. H., & Son<br>Ellwood & Co., J., & Co.<br>Hartick & Co., Lim. ("Shoot")<br>Robinson & Sons<br>Schutze, F., & Co.<br>Wood, Vincent                                                                                                                                          | <b>BATH &amp; FLESH GLOVES</b><br>Barclay & Sons, Lim.<br>Chemists' Association, Lim.<br>Maw, S., Son & Thompson<br>Solport Bros.<br>Wood, Vincent                                                                                                                                                                                                                                                                                         | <b>CARBOLIC ACID</b><br>Mason, C. E., & Co.<br>Stevenson, H. E., & Co. (Lim.)<br>Wandsworth Chemical Works                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>CHLOR. OF LIME</b><br>Government Sanitary Co.<br>Hebden, W. C.<br>National Chemical Co.                                                                                                           |
| <b>ADVERTISING SPECIALITIES</b><br>Gorsan, J. B.<br>Harris, J.                                                                                                                                                                                                    | <b>BATH SALTS</b><br>Landor, Anderson & Co.<br>Tidman & Son, Lim.                                                                                                                                                                                                                                       | <b>BORAX</b><br>Howards & Sons<br>Mack's Staroh                                                                                                                                                                                                                                                                                                                                                                                            | <b>CSCRA SAGRADA</b><br>Anderson & Co.<br>Duncan, Flockhart & Co.<br>Evans, Sons & Co.<br>Ferris & Co.<br>Harker, Stagg & Morgan<br>Moss, J., & Co., Lim.<br>Parke, Davis & Co.<br>Squire & Sons<br>Stearns, F., & Co.                                                                                                                                                                                                                                                                                                                                                                                                    | <b>CHLORODYNE</b><br>Blyton, Astley & Co.<br>Davenport (Brownie's)<br>Towie, A. P., & Son                                                                                                            |
| <b>AERATED MINERALS</b><br>Apollinaris Co.<br>Barnett & Foster<br>Bratby & Hinchliffe, Lim.<br>Chemists' Aerated Waters Association, Lim.<br>Ellis & Son (Ruthin)<br>Loris & Co., Lim.<br>Ingram & Royle<br>Jewsbury & Brown<br>Mills & Co. (Bourne)<br>Oberbrunn | <b>BEESWAX</b><br>Bowlidar & Co.<br>Evans, Sons & Co.<br>Kemp & Son                                                                                                                                                                                                                                     | <b>BRUSHES</b><br>Evans, Sons & Co.<br>Hovenden & Sons<br>Kent, G. B., & Sons                                                                                                                                                                                                                                                                                                                                                              | <b>CERESINE WAX</b><br>Boehm, Fredk.   Püster, F.<br><b>CHALK, PRECIP.</b><br>Levermore, Aug., & Co.<br>Nicholls, G. W.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>CHLOROFORM</b><br>Duncan, Flockhart & Co.<br>Macfarlan, J. F., & Co.<br>Smith, T. H., & Co.<br>Wright, Layman & Umay                                                                              |
| <b>BITTO PLANT</b><br>(See STYPHONS AND ESSENCE.)<br>Barnett & Foster<br>Bratby & Hinchliffe, Lim.<br>Cow, P. W., & Co.<br>Rylands, Dan, Lim.<br>Tyler, Hayward, & Co.                                                                                            | <b>BIPALATINOIDS</b><br>Hearon, Squire & Francis<br>Hewlett & Sons<br>Howards & Sons<br>May & Baker, Lim.<br>Syms & Co.   Tyrer, T., & Co.<br>White, Alfred, & Sons                                                                                                                                     | <b>BUNSEN BURNERS</b><br>Berend & Co.                                                                                                                                                                                                                                                                                                                                                                                                      | <b>CHECK TILLS</b><br>National Cash Till Co.<br>O'Brien, Thos.<br>Stokes, G. L., & Co., Lim.<br>Voucher Check Till Co., Lim.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>COCA &amp; CHOCOLATE</b><br>Cadbury Bros.   Christy & Co<br><b>COCAINE-HYDRO.</b><br>Howards & Sons                                                                                               |
| <b>AGNCIES ABROAD</b><br>Australian Drug Co.<br>Bolsay<br>Kempthorne, Prosser & Co.<br>Lennon, B. G., & Co. (N.Z.)<br>Peake, Allen & Co.<br>Scul, W. H., & Co.<br>Taylor & Colledge                                                                               | <b>BOXES</b><br>Austin & Co. (Cardboard)<br>Ayrton & Saunders<br>Evans, Sons & Co.<br>Ford, Shapland & Co.<br>Kent, G. B., & Son<br>Kilner Bros.   Maxime & Co<br>Kirtley, G. C.<br>Patent Stopper, Box, and Stamping Co. (Lim.) (Fin)<br>Rem & F. (Cardboard)<br>Robinson & Sons<br>Rylands, Dan, Lim. | <b>BUTTER COLR., &amp; Co</b><br>Boulton, J., & Co., Lim.<br>Crawshaw & Co.<br>Tomlinson & Hayward<br>Wells & Richardson Co.                                                                                                                                                                                                                                                                                                               | <b>CHEMICALS</b><br>Berger, Kahler & Co.<br>Boehm, Fredk.<br>Boehringer, C. F., & Sohn<br>Boulton, J., & Co., Lim.<br>Brunner, Mond & Co., Lim.<br>Burton, W., & Sons<br>Evans, Sons & Co.<br>Goodall, Backhouse & Co.<br>Graf, F.   Harrington Bros.<br>Hill, A. S., & Son<br>Hodgkinson, Treacher & Howards & Sons (Pharm.)<br>Lofthouse & Saltmer<br>Lorenz, H.<br>Macfarlan, J. F., & Co.<br>May & Baker, Lim.<br>Morris & Callard   Moss & Co<br>Oppenheimer, Son & Co.<br>Smith, T. H., & Co.<br>Stevenson, H. E., & Co.<br>Tyrer, T., & Co.<br>Washington Chemical Co.<br>White, A., & Sons<br>Zimmermann, A. & M. | <b>COCA WINE</b><br>Armbricht, Nelson & Co.<br>French Hygienic Soc.<br>Lorimer & Co.<br>Stephen Smith & Co. (Hall's)                                                                                 |
| <b>ALKALOIDS</b><br>Howards & Sons (Olinchona)<br>Macfarlan, J. F., & Co.<br>Smith, T. H., & Co.                                                                                                                                                                  | <b>BISMUTH PREP.</b><br>Hearon, Squire & Francis<br>Hewlett & Sons<br>Howards & Sons<br>May & Baker, Lim.<br>Syms & Co.   Tyrer, T., & Co.<br>White, Alfred, & Sons                                                                                                                                     | <b>CACHOUS</b><br>Blyton, Astley & Co.<br>Raines & Co.   Warriok Bros.                                                                                                                                                                                                                                                                                                                                                                     | <b>COD-LIVER OIL</b><br>Allen & Hanburys<br>Burroughs, Wellcome<br>Evans, Sons & Co.<br>Hill, A. S., & Son<br>Hockin, Wilson & Co.<br>Kemp & Son<br>Lofoden Cod Liver Oil Co.<br>Lorimer & Co.<br>Miller, P.   Moss, J., & Co.<br>Oppenheimer, Sons & Co.<br>Richardson, J., & Co., Lim.<br>Smith, T. H., & Co.<br>Spratt's Patent (Dog Calais)<br>Scott's Emulsion<br>Stevenson, H. E., & Co.<br>Terror Co. (substitute)<br>Woollys, Sons & Co.<br>Wright, Layman & Umay                                                                                                                                                 | <b>COFFEE</b><br>Erhardt, W. (Maw)                                                                                                                                                                   |
| <b>AMMONIA</b><br>May & Baker, Lim.<br>White, A., & Sons<br>Woolley Sons & Co.                                                                                                                                                                                    | <b>BOOKS</b><br>Hargreaves, Dr., M. D.<br>Heinemann,   W. Müller, P.<br>Squire's "Companion"                                                                                                                                                                                                            | <b>CAPSULES</b><br>Denoual, J. (Medicinal)<br>Duncan, Flockhart & Co.<br>Evans, Sons & Co.<br>Evans, H., & Co. (Lim.) (Dun's)<br>Hooper, B., & Co.<br>Lloyd, T. Howard, & Co.<br>Lofthouse & Saltmer<br>Maw, S., Son & Thompson<br>Parke, Davis & Co. (Co. Lim.)<br>Patent Stopper Box and Stamp<br>Richardson, John, & Co. (Leicester), Lim<br>Warriok Bros.   Wylslys, Lim.                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                      |
| <b>ANILIN COLOURS</b><br>Pickard & Co.                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                      |
| <b>APPARATUS</b><br>Bennett, Sons & Shears<br>Berend, O., & Co.<br>Christy, T., & Co.<br>Derooy Fils Aine<br>Rogers, P.                                                                                                                                           |                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                      |



**COLAPSE TUBES**

Betts &amp; Co.

**COMBS**

Hovenden &amp; Sons

**COMP. MEDICINES**

Allen &amp; Hanburys

Blyton, Astley &amp; Co.

Burroughs, Wellcome &amp; Co.

Hooper, B. &amp; Co. | Leo &amp; Co.

Lloyd, T. Howard, &amp; Co.

Parke, Davis &amp; Co.

Richardson, J. &amp; Co., Lim.

**CONCENT. LIQES.**

Bais Bros., &amp; Co.

Cooper &amp; Co.

Fletcher, Fletcher &amp; Co.

Lloyd, T. Howard, &amp; Co.

Oppenheimer, Son &amp; Co.

Richardson, J. &amp; Co., Lim.

**CONFECTIONERY**

Randall &amp; Son

**CORN CURES**

Gardner, C.

**COTTON WOOL**

Haynes, G. &amp; Co. (Absorbent)

Robinson &amp; Sons (Absorbent)

Sanger, J. &amp; Co.

Warrick Bros. | Wilson, A.

Woods, W. (Arca Nut)

**DIPHTHERIA****REMEDY**

Meister, Lucius &amp; Bruns

**DISINFECTANTS**

Barclay &amp; Sons, Lim.

Beedler &amp; Co., Brooks, T.

Drysdale, J. W. &amp; Co.

Fletcher Bros. &amp; Co.

Government Sanitary Co.

Hobden, W. C.

Jeyes' Sanitary Compounds Co.

Laker, Millar &amp; Co.

Mackey, Mackey &amp; Co.

Mason, D. E., &amp; Co.

May &amp; Baker, Lim.

National Chemical Co.

Ness &amp; Co.

Odams' Chemical Co., Lim.

Sanitas Co., Lim.

Seabury &amp; Johnson

Tyler, T. &amp; Co., Lim.

Wandsworth Chemical Works,

**DOG MEDICINES**

Spratt's Patent, Lim.

**DRUGGISTS' SUN.**

Ayrton &amp; Saunders

Barclay &amp; Sons, Lim.

Bleasdale &amp; Co., Lim.

Chemists' Association, Lim.

Evans, Lescher &amp; Webb

Evans, Sons &amp; Co. (Savara)

Feaver, J.

Fordham, W. B. &amp; Sons, Lim.

Hockin, Wilson, &amp; Co.

Hovenden &amp; Sons

Howard, J. &amp; Co.

Kay Bros., Lim.

Maw, S., Son &amp; Thompson

May, Roberts &amp; Co.

Newberry, F. &amp; Sons

Farmer &amp; Co., Lim.

Quelch, H. C.

Reynolds &amp; Branson

"Rypons"

Fanger &amp; Sons | Schutz &amp; Co.

Tydman &amp; Son | Toogood, W.

Tunbridge &amp; Wright

Wood, Vincent

**DRUGS**

Allen, S., Sons Grinders

Bleasdale &amp; Co., Lim. | Graf, F.

Hop, R. Morrison, R., &amp; Co.

Oppenheimer, Son &amp; Co.

Phillips &amp; Co. ((Grinders))

Richardson, J. &amp; Co., Lim.

Saunders Br.

Stevenson, H. E. &amp; Co.

**DRYSALTERIES**

Browning, J. H., &amp; Co.

**DYES, &c.**

Crawshaw &amp; Co.

Hart &amp; Co., Ltd., "Diamond"

**EAU DE COLOGNE**

Farina, J. M.

Hockin, Wilson &amp; Co.

Muhlen, F.

van Oppen &amp; Co.

**ECZEMA**

Cullwick's Skin Ointment

Cullwick's H. &amp; A. Tablets

**EMBRICATION**

Day &amp; Sons

Elliman, Sons &amp; Co.

Embrokton Co.

Harvey &amp; Co.

"Rypons"

**ESSENCES**

Boulton, J. &amp; Co., Lim.

Bovril, Lim. (Bier)

Brady &amp; Hinchliffe, Lim.

Burgoyne, Burdidge &amp; Co.

Bush, W. J., &amp; Co.

Fletcher, Fletcher &amp; Co.

Goodall, Backhouse &amp; Co.

Jiris &amp; Co, Lim.

Lorimer &amp; Co.

May &amp; Baker, Lim.

Newball &amp; Mason

Rylands, Dan, Lim.

Stevenson &amp; Howells

Tyler, F. (Anchorites)

Tyler, T., &amp; Co.

Woolf &amp; Sons &amp; Co.

**ENEMAS**

Barclays, Lim.

Evans, Sons &amp; Co.

Hart &amp; Co., Lim. ("Back")

Putney, J., &amp; Sons

Sanger &amp; Son | Wood, Vincent

**ENGRAVERS**

Corsan, J. R.

**ESSENTIAL OILS**

Boehm, Fredk.

Bush, W. J., &amp; Co.

Dodge &amp; Olcott

Drysdale, J. W., &amp; Co.

Evans, Sons &amp; Co.

Jackson, J. &amp; Co.

May &amp; Baker, Lim.

Poppelreuter, W.

Ransom, Wm., &amp; Sons

Rylands, Dan, Lim.

Sozio &amp; Andrioli

Sparway &amp; Co.

Stevenson, H. E., &amp; Co.

Stevenson &amp; Howell

Sykes &amp; Co., Todd, A. M.

Treat, R. C. | Warrick Bros.

Widemann, Brocher &amp; Co.

Wright, Layman &amp; Umney

**ETHER**

Duncan, Flockhart &amp; Co.

Howards &amp; Sons

Macfarlan, J. F., &amp; Co.

May &amp; Baker, Lim.

Robbins, J., &amp; Co.

Tyler, T., &amp; Co.

White, A., &amp; Sons

Woolley, Sons &amp; Co.

Wright, Layman &amp; Umney

**EUCALYPTUS**

Bush, W. J., &amp; Co.

Faulding, F. H., &amp; Co.

Langland, Mackay &amp; Baker

Tasmanian Eucalyptus Oil Co.

**EXTRACT MEAT**

Armour &amp; Co. Brand &amp; Co.

Idris &amp; Co. (Viking Co.)

Leibis Co.

Liquor Carnis Co.

Mason, G., &amp; Co., Lim.

Wyeth, J., &amp; Brother

**EXTRACTS, FLUID**

Allen &amp; Hanburys

Allen, G., &amp; Co.

Bleasdale &amp; Co., Lim.

Burgoyne, Burdidge &amp; Co.

Evans, Sons &amp; Co.

Fletcher, Fletcher &amp; Co.

Hearson, Squire &amp; Francis

Hooper, B. &amp; Co.

Lloyd, T. Howard, &amp; Co.

Moss &amp; Co.

Parke, Davis &amp; Co.

Potter &amp; Clarke

Ransom, W., &amp; Son

Richardson, J., &amp; Co., Lim.

Wright, Layman &amp; Umney

**EXTRACTS, SOLID**

Allen, G., &amp; Co.

Bangs, W., &amp; Son

**FEED BOTTLES**

Burroughs, Wellcome &amp; Co.

(Thermo Safe)

Chemists' Association, Lim.

Evans, Sons &amp; Co.

Gilbert, H., &amp; Sons

Hearn, Wright &amp; Co.

Hockin, Wilson &amp; Co.

Hovenden &amp; Sons

Kilner Bros.

Marriott, E. &amp; Co.

Maw, S., Son &amp; Thompson

May, Roberts &amp; Co.

Shirley Bros. | Youldon, E.

**FILTERS**

Fordham, W. B., &amp; Sons, Lim.

Pasteur Germ Filter

**FORMULÆ**

Brooks, T.

**FLY PAPERS**

Buchan, D.

Ford, Shapland &amp; Co.

Fry, H. &amp; Co.

Gather, W. Lim.

May, Roberts &amp; Co.

Silverlock, H. | Strong, Christy

Tydman &amp; Son

Tidwell &amp; Wright

**FOOD (Infants & Invalids)**

Allen &amp; Hanburys

Benger's Food

Brand &amp; Co.

Cerebos Salt Co., Lim.

Evans, Sons &amp; Co.

Glendinning, W., &amp; Sons

Goodall, Backhouse &amp; Co.

Hearson, Squire &amp; Francis

Liquor Carnis Co.

Liebig Co. | Lorimer &amp; Co.

Mason, G., &amp; Co., Lim.

Mellins Food | Nestlé, H.

Tyler, P.

Baking Food Co.

Wyeth, J., &amp; Bro.

**FULLERS' EARTH**

Barclay &amp; Sons, 'im.

Fullers' Minnie Co., Lim.

**GAS BURNERS**

Incandescent Gas Light Co., Ltd

**GELATINES**

Astley, Cooper &amp; Co.

Boehm, F.

Herr, J. &amp; Co.

**GINGER ALE**

Brady &amp; Hinchliffe, Lim.

Chemists' Association, Lim.

Water Association, Lim.

Ellis &amp; Son

Mills, R. M., &amp; Co.

Rose &amp; Sons, Lim.

**GLYCERINE**

Blyton, Astley &amp; Co. (Pastilles)

Boehm, F.

Fink &amp; Co.

Price's Candle Co., Lim.

**GUM**

Fink &amp; Co. (Arabic, &amp;c.)

**GRANULAR PREP.**

Bishop, A. &amp; Son

Blyton, Astley &amp; Co.

Evans, Sons &amp; Co.

Hearson, Squire &amp; Francis

Lloyd, T. Howard, &amp; Co.

Richardson, J., &amp; Co., Lim.

Tyler, T., &amp; Co.

Wright, Layman &amp; Umney

**HAIR PREP.**

Rates, F. W.

Chesebrough Co.

Edwards &amp; Co.

Treat, H. P., Lim.

**HERB BEER EXTS.**

Newball &amp; Mason

Pegg, J. A.

Potter &amp; Clarke

Southall Bros. &amp; Barclay

**HOMOPATHIO**

Epps, James &amp; Co., Lim.

Keene &amp; Ashwell

Leath &amp; Ross

Watson &amp; Wiles

**HYPOPHOSPHITES**

Duncan, Flockhart &amp; Co.

Fellows

Fletcher, Fletcher &amp; Co.

Lorimer &amp; Co. | Symes &amp; Co.

**INHALERS**

Burroughs, Wellcome &amp; Co.

Gilbertson, H., &amp; Sons

Hockin, Wilson &amp; Co.

Toogood, W.

**INK**

Beyler &amp; Draper, Lim.

**INSECTICIDES**

Barclay &amp; Sons, Lim.

Fleming's Oil and Chemical

Co. (Lim.)

Hockin, Wilson &amp; Co.

Lorimer &amp; Co.

Sandford &amp; Sons

Steiner &amp; Co.

Stevenson &amp; Howell

**IRON, REDUCED**

Barnard, K. &amp; Co.

**JELLOIDS**

Warrick Bros.

**KETCHUP**

Tyler, P.

**KOLA**

Christy &amp; Co.

Moss, John, &amp; Co.

**LAMPS**

Hockin, Wilson &amp; Co.

**LARD**

Ewon, J., &amp; Sons



**QUININE SALTS**

Buehringer, C. F., & Sohne  
Hockin, Wilson & Co. (Wine)  
Hockin, Wilson & Co. (Wine)  
Smith, S., & Co. (Wine)  
Zimmermann, A. & M.

**RENNET**

Duncan, Flockhart & Co.  
Tomlinson & Hayward

**RUBBER GOODS**

Braubaum, B., & Son, Lim.

**SACCHARIN**

Green, H. W., & Co.

**SACHETS**

Warwick Bros.

**SALICIN**

Macfarlan & Co.  
Smith, T. & H., & Co.

**SALICYLIC ACID**

Burgoyne, Burdidge & Co.  
Zimmermann, A. & M.

**SALTS**

Hobdeler, K.

**SARSAPARILLA**

Wilkinson's

**SAUCES, PICKLES**

Goodall, Backhouse & Co.  
Tyrer, P.

**SCHOOLS, &c.**

Central School of Chemistry  
City School of Chemistry and  
Pharmacy, Lim.

London Homoeopathic and  
Medical School

Manchester Col. of Pharmacy

Metropolitan Col. of Pharmacy

Newcastle School

Northern College of Pharmacy

North of England School

Sheffield College of Pharmacy

South London School of  
Pharmacy, Lim.

Strand College

The School of Pharmacy

Westminster College

**SCIENTIFIC****INSTRUMENTS**

Darton & Co.

**SEA SICKNESS****REMEDY**

Yanatas, Lim.

**SEEDS**

Potter & Clarke

**SEIDLITZ POWDERS**

Bytton, Astley & Co.  
Hockin, Wilson & Co.  
Hors & Co. | May, Roberts & Co.

**SELTZOGENES**

Bratby & Hinchliffe, Lim.  
British Syphon Manufactur-  
ers, Sons & Co. (F. & W.)  
Gerant, E., & Co.  
Hockin, Wilson & Co.  
May, Roberts & Co.

**SHAVING**

Hovenden & Sons (Exeter's)  
Lloyd, Mrs. A. S. (Exeter's)  
Friedelt, H. F., Lim.

**SHEEP DIP**

Fletcher Bros. & Co.  
Jeyes' Sanitary Compounds Co.  
Ness & Co.  
Odams' Chemical Co., Lim.

Tomlinson & Hayward, Lim.

**SHOP FITTERS**

Bowling & Gowler  
Bygrave, J. & W.  
Evans, Sons & Co. Howlett, S.  
Josephs, P. | Freble, U., & Son

**SOAP**

Ayrton & Saunders  
Barclay & Sons, Lim.  
Blondeau & Co (Vinolia)  
Bronnley, H., & Co.  
Cook, E., & Co.

Evans, Sons & Co.  
Fordham, W. B., & Sons, Lim.  
Jeyes' Sanitary Compounds Co.  
Lorimer & Co. | Muhlen, F.  
Pears, A. & F., Lim.

Sinclair, J., & Son  
Toman & Son  
United Alkali Co., Lim.  
Wright, Layman & Umney  
Yardley & Co.

**SODIUM PRIDE.**

Burton, W., & Sons

**SPECTACLES**

Botwright & Grey  
Fenton, F., & Co.  
Optical Sight-Testing Co., Ltd.  
Raphael, J., & Co.

**SPONGES**

Cresswell Bros. & Schmitts  
Evans, Sons & Co.  
Harks, Henry, & Sons (Lim.)  
Peterson, M., & Co.

**STARCH**

Barclay & Sons, Lim.  
Chancellor & Co. (Maok's)  
Orchley (Gloss) Double

**STOPPERS**

Austin & Co (Sprinklers)  
Barnett & Foster  
Birn, Ingham Stopper Co.  
Melin, U.  
Orchard, E. (Poison)

Patent Stopper, Box, and  
Stamping Co. (Lim.)  
Steindun Stopper Co., Lim.

**STAMPS (RUBBER)**

Hickison, J.

**STOVES**

Clark, S., & Co., Lim.

Seppel, L.

**SUGAR OF MILK**

Boehm, Fredk.

**SURGICAL**

Ayrton & Saunders  
Bailey, W. H., & Son  
Barclay & Sons, Lim.  
Burgoyne, Burdidge & Co.  
Cooking, J. T., & Co.

Ellwood Lee, J., & Co.  
Eschmann Bros. & Walsh  
Ferris & Co. | Harris, J.  
Hatrick & Co., Lim.

Hicks, J. J.  
Kahnemann & Krause  
Krohne & Sesemann  
Liverpool Patent Lint Co.  
Macfarlan, J. F., & Co.

Mather, W., Lim.  
Maw, S., Son & Thompson  
Oppenheimer, Son & Co.  
Powell & Barstow

Quelch, H. C.  
Richardson, John, & Co., Lim.  
Robinson & Sons  
Schutze, F., & Co.

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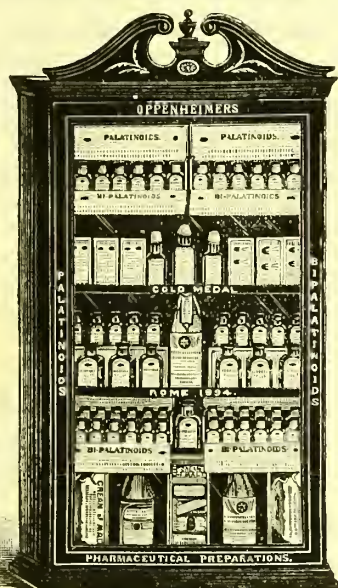
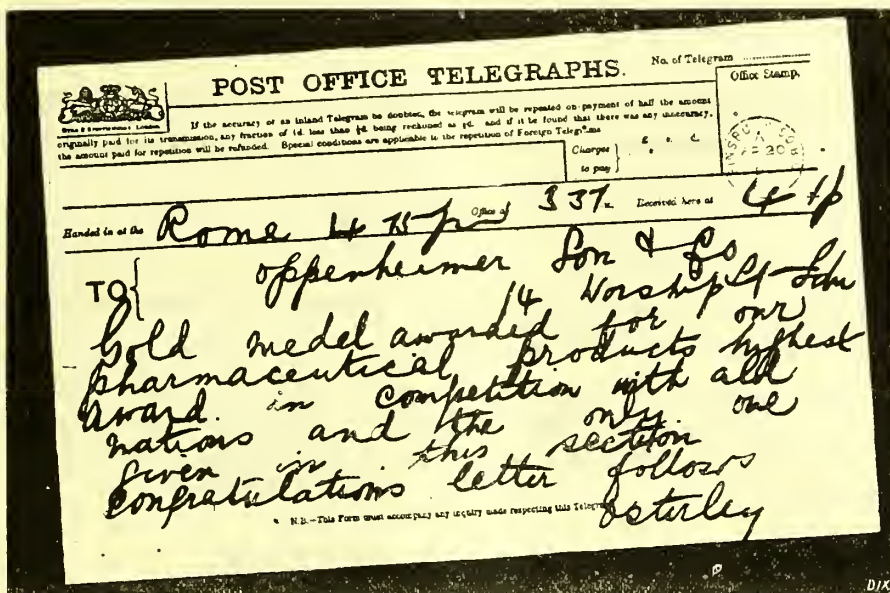


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*The choice of a* adviser. The selection of roborants  
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*Made from Barley* upon which an ideal Malt Extract depends, the process of manufacture is

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*The important* important considerations are unswervingly kept in view. The material used is the best that can be obtained, and by means of perfect apparatus, constant watchfulness, and a long experience, we have been enabled to obtain for the Kepler Extract of Malt the warm approval of the highest authorities; in fact, its qualities and characteristics are so excellent as to induce competent writers to propose that they be taken as a standard for a pharmacopoeial test for Malt Extracts generally.

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*The value of*  
*Kepler Malt*  
*Extract in*  
*various dis-*  
*eases.*

bodies which the child would otherwise be unable to digest. Cases of rickets and scrofula are greatly benefited by its use, while in phthisis and all other wasting diseases it cannot be too highly praised. In phthisis, Kepler Malt Extract, given with some light farinaceous food at bedtime, often gives marked relief from those troublesome complications, insomnia and night sweats.

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*It does not*  
*ferment.*

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*An aid to*  
*digestion.*

maladies it maintains the strength, enables the patient to better withstand the disease, and prolongs life. Used as

an aid to digestion, Kepler Extract should be taken with the starchy food, or, better still, may be mixed with farinaceous food and kept at a moderate heat for a short time before the meal is taken. Mixed with water, aerated or plain, or with milk, Kepler Extract of Malt affords a very pleasing and highly nourishing beverage.

The LANCET reported upon the Kepler Extract of Malt as follows:—"It is the best known, and, in this country, the

*The Lancet's*  
*opinion.*

largest used Extract of Malt. It is as distinct an advance in therapeutics as was the introduction of cod-liver oil. It

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The BRITISH MEDICAL JOURNAL reported as follows:—"This (the Kepler) Improved Malt Extract has now been

*The British*  
*Medical*  
*Journal's*  
*testimony.*

under trial for some time, and is very favourably spoken of by physicians, both in respect to its nutritive and digestive properties, and as being of very agreeable flavour. It is concentrated in vacuo,

and, being prepared at a very low temperature, its qualities are not deteriorated nor is its flavour spoiled in the preparation. We can recommend the Kepler Malt Extract as being of very high quality indeed."

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*The many*  
*and varied*  
*uses of Kepler*  
*Malt Extract.*

processes. FIFTHLY: Because nothing is wasted, and the digestive, nutritive, and alterative principles of the grain are secured. SIXTHLY: Because nothing insoluble and indigestible is retained.

SEVENTHLY: Because in taste it is as delicious as honey. EIGHTHLY: Because in the system none of it is lost, and it is all easily absorbed. NINTHLY: Because there is no such agreeable substitute for cod-liver oil.

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## CONTENTS: Vol. XLVI. No. 13.

| PAGE                                                        | PAGE                                             |
|-------------------------------------------------------------|--------------------------------------------------|
| Argon..... 466                                              | Foreign and Colonial News.... 445                |
| Bankruptcy Reports..... 456                                 | French News..... 444                             |
| Business Changes..... 445                                   | Gazette..... 454                                 |
| Chemical Society..... 419                                   | Irish News..... 443                              |
| Chemicals and Conventions.... 470                           | Legal Reports..... 454                           |
| Constructive Criticism of the<br>British Pharmacopœia. III. | New Companies and Company<br>News..... 457       |
| New Organic Remedies, by<br>H. Helbing..... 463             | Next Week..... 476                               |
| Correspondence..... 472                                     | Notes of Novelties..... 451                      |
| Deaths..... 464                                             | Personalities..... 465                           |
| Deaths of Arrangement..... 453                              | Pharmaceutical Society of Great<br>Britain:—     |
| Editorial Comments:—                                        | North British Branch..... 446                    |
| Joint-stock Pharmacy..... 458                               | Scotch News..... 444                             |
| Argon and Helium..... 459                                   | Student-Studies, V.—The Poor<br>Student..... 462 |
| George West Sargent..... 460                                | The Winter Session..... 452                      |
| Crystallised Glycerine..... 460                             | Trade Notes..... 462                             |
| Notes..... 461                                              | Trade Reports..... 467                           |
| English News..... 440                                       |                                                  |

## COLONIAL ISSUE.

THE publisher of THE CHEMIST AND DRUGGIST proposes on April 20 to specially address all business houses connected with the drug-trade in India, Ceylon, Straits Settlements, South Africa, West Indies, China, Japan, and many other places abroad. With revised registers to go upon, and a good number of the journal, the publisher hopes to wake up many to the importance of business with Britain. Doubtless there are many firms who would like to participate. If so, they should address the publisher.

## BOOKS TO BUY.

ALL chemists and druggists and their assistants should have the following books in their libraries for reference:—

- "The Art of Dispensing." 3s. 6d.
- "Veterinary Counter-Practice." 3s. 6d.
- "Handybook of Medicine-stamp Duty," by E. N. Alpe, barrister, Somerset House. 2s. 6d.
- "Pharmaceutical Testing," by B. S. Proctor. 2s. 6d.
- "Pharmacy and Poison Laws of the United Kingdom." 2s. 6d.
- "Guide to the Pharmaceutical Preliminary Examination," by W. Dolds. 2s. 6d.

The books can be obtained from most wholesale houses, or we can send either of them by post for 3d. extra. ("The Art of Dispensing" is 3s. 10d. by post.) They are the best books of the kind published.

## Summary.

WE publish the results of a number of contracts for drugs, &c. (p. 441).

WE print some interesting practical notes by Mr. Wokes, of Liverpool (p. 453).

OXYGEN and nitrogen are each composed of two gases, so Ramsay and Baly suppose (p. 452).

EDINBURGH chemists have agreed to appeal to doctors in regard to prescribing proprietary medicines (p. 444).

Two little girls, daughters of a Bristol chemist, were killed in the gale last Sunday by the falling of a tree (p. 442).

IN his Pharmacopœia paper Mr. Helbing discusses the principles which should guide the authorities in officialising new remedies of chemical origin (p. 463).

PHARMACOPŒIA revision has been dealt with at the evening meeting of the Pharmaceutical Society in Edinburgh (p. 446), and by Mr. Brodie at Glasgow (p. 453).

TECHNICAL education was the subject of a speech by Professor Attfield at Watford (p. 440), and Mr. A. J. Balfour spoke on it at the Chemical Society's dinner (p. 450).

MR. SARGENT, the eccentric Kensington chemist who wrote pseudo-official letters to the trade, has died under tragic circumstances, probably from starvation (p. 440 and p. 460).

SOME further information is given regarding crystallised glycerine, which was first observed in 1867. We show that the crystals can be grown at the normal temperature (p. 461).

THE Select Committee of the House of Commons on the Early Closing Bill has met twice since our last, and has taken the evidence of several secretaries in its favour (p. 442).

A PHARMACY ACT suit has been heard at Carnarvon, in which it is alleged and denied that a firm of grocers sold a bottle of Fellows's syrup. The decision has not yet been given (p. 454).

ELEVEN London pharmacies have been amalgamated into a limited company, under the title of Lewis & Burrows (Limited). It is stated that the public have over-subscribed for the ordinary shares (pp. 456 and 458).

A CHEMIST at Torquay has been fined 7s. 6d. for keeping boxes and hampers on the public footpath, and a chemist at Carlisle has been fined 2s. 6d. for having unstamped weights and inexact scales in his possession (p. 442).

IF a horse comes through a chemist's window, it appears to be doubtful whether the owner of the horse is liable for damages. A case at Liverpool is reported on p. 455, in which the Lord Chief Justice's remarks are of importance.

THE Greenock Sheriff Principal has, on appeal, confirmed the decision of the lower Court in the action brought by a Greenock druggist's assistant against a local doctor for slander. The Court considers it proved that the plaintiff passed his Preliminary examination by proxy, which was part of the alleged slander (p. 455).

OUR Trade Reports mention a slight tendency towards improvement in the drug and chemical markets. Changes of price in an upward direction have occurred in several Chinese and Japanese articles, but in one or two other important drugs, notably opium and cod-liver oil, the tendency is the other way (p. 467).

IN our Correspondence columns schemes for the prevention of cutting are condemned, Mr. E. G. Clayton disclaims the statements printed in *Tit Bits* as coming from him, several writers point out that the Post Office does not interfere with early closing, and we have more information regarding the Pharmacist in Fiction (p. 472).

AT the anniversary meeting of the Chemical Society Lord Rayleigh was presented with the Faraday medal, and Professor Ramsay announced the discovery of helium, an element lighter than hydrogen (p. 449). Helium is also referred to on p. 459 in connection with argon, the two having been obtained from the mineral cleveite.





## English News

*The Editor is obliged to correspondents who send local newspapers containing items of interest to the trade. He will be further obliged if such paragraphs be marked in all cases.*

### London County Council Work.

A complete rearrangement of the staff of the chemical and gas department of the London County Council has just taken place. The staff, under Superintendent W. J. Dibdin, F.I.C., is now divided into three departments. The chief of these is the General Laboratory and Gas-testing division, whose duty is to control all the analytical work, the feeding-stuffs and fertilisers analyses and the gas-testing. Mr. R. Grimwood, F.I.C., appears as first in this division, followed by Mr. E. J. Parry, B.Sc., and Mr. J. H. Coster, in addition to the junior and temporary staff. The Sewage and Rivers' Pollution division is headed by Mr. G. Thudichum, and the Petroleum and Gas-meter Testing and Clerical division is under the charge of Mr. W. J. Livingstone.

Three of the most important committees of the Council are to be presided over by chemists. Mr. T. H. Williams Idris will, most appropriately, direct the labour of the Water Committee, whose duty during the next three years will be largely concerned with the efficiency and purity of London's water supply. Mr. Pearce, the sulphuric-acid manufacturer, has been appointed chairman of the Bridges Committee, and Mr. McDougall is chairman of the Asylums Committee.

### Professor Atfield on Technical Education and Trade Unions.

A series of science lectures for the people under the Gilchrist Trust has been given at Watford during the past winter, Professor Herkomer, Sir John Evans, and Sir Robert Ball being among the lecturers. The course was highly successful, the attendance averaging between 1,400 and 1,500 at each lecture. At the close of Sir Robert Ball's lecture last week, this being the conclusion of the series, Professor Atfield, who presided, referred to a movement which had been started to develop the technical classes at present being held into a Technical College. As Chairman of the Town Committee which had organised the lectures, he said it was his duty to warn, as well as to encourage, those who were aiming to found this Technical College. A large amount of money, he said, must be collected, a large amount of organisation must be devised. But anterior to all this we must have a broad and settled view as to what the working men and women, and working students, of our county hope and intend to do with technical knowledge when they have got it. Assume the necessary funds to have been collected, assume an adequate extension of the Public Library premises or of a new and special building, assume abundance of competent teachers and throngs of earnest students, assume that a session or two has past, and that sound examination and honest certification has classed a session's students into good, better, and best. Now, you artsmen and craftsmen, and now you artswomen and craftswomen of the county, answer us this question: "What do you intend to do with a good student, a better student, and a best student, respectively?" I am told, I trust I am not told truly, that the tendency of some of the trade unions of the country is, firstly, to restrict a workman to one kind of work, no matter what his natural and cultivated abilities may enable him to compass; secondly, to restrict workmen to the performance of equal amounts of work in equal times, instead of encouraging them to do their best and their most for themselves, their wives and children, their employers, and their country; and thirdly, that the best workman is restricted in the amount of work he performs to the amount that can be done by the worst workman. I trust I am wrongly informed as to that state of things. But if I am rightly informed, I say that such a state of things is

utterly incompatible with the successful foundation of a technical college. It is useless with one hand to raise the powers of your sons and daughters, if with the other you depress them again to a dull dead level. It must be almost useless to develop all the latent powers of the mind or muscle of a young man or a young woman if immediately afterwards you are to restrict him or her to the exercise of one only of those powers. It must be almost useless to raise the powers of a whole class of workers, and to find out, for the good of themselves and their country, which are the good, the better, and the best, if immediately afterwards you are to reduce the power of the best to the power of the worst. Look to it, craftsmen and craftswomen of Hertfordshire. Let us understand one another. We are all anxious to raise our technical powers to those of other countries, and once more to excel other countries, if possible. Let us remove all impediments, if there are any, to our working hand in hand, heart to heart, for the welfare of our children and our country. Impediments removed, rest assured that money and brain-power will be forthcoming for the successful establishment of a complete technical college.

### Death of Mr. Sargent.

The death of Mr. Geo. West Sargent, who for many years carried on business as a chemist and druggist at 75 Church Street, Kensington, has created a considerable sensation in that neighbourhood. The deceased, who was a bachelor, some six years ago relinquished the keeping of either housekeeper or servant, and lived entirely alone, a boy being engaged to take out medicines. On Tuesday last week, the boy on entering the shop was surprised to find his master lying on the floor behind the counter. The boy fetched Mr. Brutey from the next shop, who immediately sent for the police and for medical aid. Dr. Vawdrey, of Sheffield Gardens, was soon in attendance, and at once ordered Mr. Sargent's removal. The police ambulance conveyed the sinking man to the station, where the inspector ordered him to be taken to St. George's Hospital. Mr. Sargent died on Wednesday morning, at 4 o'clock. Our representative's inquiries show that, early on Tuesday morning, Mrs. Brutey, the wife of the next-door tradesman, heard a tapping at the wall, but no notice was taken of it. The deceased was of decidedly eccentric character, and in recent years became very neglectful in his personal habits, though the front shop was kept remarkably clean. He lived in a strange manner at the house in Church Street, at the same time carrying on a lucrative business of the best class. In 1892, after the decision in the libel action *Bottle v. Sargent*, which will be in the memory of our readers, Mr. Sargent was so annoyed that he immediately went home and cut the initials "M.P.S." (indicating his membership of the Society) out of the blind in his window, replacing them with a large patch, which has remained ever since. The following letter, bearing the trade stamp of Mr. Sargent, was found, and indicates the uncomfortable way in which, with respect to domestic comforts, Mr. Sargent had been living:—"Private and Confidential.—75 Church Street.—Dearest Maid,—I should be glad to see you at your earliest convenience. I am desirous of marrying you as soon as possible. I require a working woman with some knowledge of cooking. The matter must be kept as quiet as possible, in order that the business may not be interfered with. I have known you for a considerable time, and pray you to come early. With every good wish, Yours obediently, G. W. Sargent. 6/3/95." On Saturday last, at Ebury Bridge, the Westminster Coroner held an inquiry touching the death. Mr. Brutey, Italian warehousman, of 77 Church Street, Kensington, stated that at first he thought from deceased's appearance he had been poisoned. He was in the act of dispensing a prescription when overtaken by faintness. Witness sent for a doctor, who tried to administer brandy, but the deceased, who had partly recovered consciousness, closed his mouth and refused to take it. He was then removed to the hospital. The witness added that deceased formerly lived at 71 Church Street, and was very eccentric. He lived alone in a large house of four storeys, and had no one to attend him except the errand-boy. Dr. Gerald Baldwin, house physician at St. George's Hospital, said he could find nothing abnormal, except that the body was very emaciated. Mr. Brutey further stated that, in his opinion, Mr. Sargent had gradually starved himself to death. He had really nothing to eat beyond a pint of milk a day,



and the scones the lad was in the habit of fetching him had lasted him a month, and they were still in the room behind the counter. The inquiry was adjourned.

#### Must Maintain his Wife.

John Vine, aged 60, described as a chemist, with "no fixed abode," was brought before Mr. Cooke, at the Marylebone Police Court on Friday last, on a warrant, charged with failing to comply with an order of the Court, made under the Married Women's Maintenance Act, to contribute 20s. per week towards the support of his wife. There is great disparity in the ages of the parties, and their married life appeared to have been far from a happy one. They have been before the Court on several occasions, and the husband has already suffered one term of imprisonment for disobeying the order of the Court which was made against him on account of his having deserted his wife. It was said that the accused at one time carried on the business of a chemist in Crawford Street, Marylebone, and that he owned a certain house in Harewood Street, but he averred that the whole of the property was mortgaged and that he was penniless. The complaint now stated that she had made inquiries with respect to her husband's means, and had ascertained that he was well able to pay the arrears due, which amounted to 10*l*. This the prisoner denied, but Mr. Cooke made an order for the payment of the money and 6*s*. costs, or in default two months' imprisonment.

#### Football.

The Westminster College and the South London School of Pharmacy football teams met at Tooting Common on Saturday, March 23, and a well-contested game ended in a victory for the former by one goal to nil. The Westminster team consisted of Messrs. Davies, Martin, J. Roberts, Charles, Russell, Duncan, Smith, Williams, R. G. Roberts, Dexter, and Barrett.

#### Charge of False Pretences.

At Weston Police Court, on Friday last week, William Thomas Foster, described as an army captain, was brought up on remand, charged with having, on March 14, unlawfully and knowingly obtained the sum of 2*l*. from W. H. Webb, chemist and druggist, of West Street, Weston-super-Mare, under false pretences. Defendant was further charged with attempting, on March 17, to obtain from Henry Charles Parkes, chemist and druggist, 34 Upper Church Road, the sum of 5*l*. and photographic apparatus to the value of 35*l*. by false pretences. Mr. Parkes deposed that he supplied defendant with some photographic apparatus on hire. Witness also changed a cheque for 5*l*. on Stuckey's Bank, Bristol, for Foster. The cheque was presented at Stuckey's Bank, and returned to him marked, "No account." John Wheeler, cashier at Messrs. Stuckey's Bank, Bristol, said he did not know defendant, who had no account at the bank, nor ever had, to witness's knowledge. For the defence, it was urged that the whole tenor of the defendant's actions showed that he was not capable of carrying on business in a proper way, or he was developing a mania rapidly. His conduct was not that of a man who premeditated an offence. Defendant, who was committed for trial at the Quarter Sessions, reserved his defence.

#### Drug Contracts.

On Monday, at the meeting of the St. Marylebone Board of Guardians, a report was submitted recommending the acceptance of the following tenders for a three months' supply of the following:—Drugs: Messrs. Hodgkinson, Prestons & King, of 81 Bishopgate Street Without, to supply the infirmary and the north and south dispensaries with drugs, as detailed, for 141*l*. 13*s*. 11*d*., 19*l*. 8*s*. 8*d*., and 61*l*. 15*s*. 10*d*., respectively. Druggists' sundries: Messrs. S. Maw, Son & Thompson, 7 to 12 Aldersgate Street, E.C., to supply the infirmary and north and south dispensaries with druggists' sundries, as detailed, for 102*l*. 8*s*. 9*d*., 47*l*. 16*s*. 8*d*., and 11*l*. 18*s*. 11*d*., respectively. The report was unanimously adopted.

Mr. John H. Morris, chemist, Medical Hall, Melton Road, Gravesend, has received the contract for the supplying of disinfectants, &c., to the Corporation of Gravesend for the ensuing year.

The Sudbry (Suffolk) Union Board of Guardians have

accepted the tender of Mr. J. J. Harding for the supply of cod-liver oil and trusses to the workhouse during the six months from April 1.

The tender of Mr. R. Blanchford, chemist, Richmond, has been accepted for the supply of chemicals to the Richmond Board of Guardians.

Mr. T. Handley has been appointed chemist and druggist to the Loughborough Board of Guardians.

Mr. Pettenger, High Street, Hampstead, has been appointed chemist to the Hampstead Board of Guardians.

The Wolverhampton Board of Guardians have accepted the tender of Messrs. J. Richardson & Co. for the supply of drugs, the total being 52*l*. 4*s*.

#### Disinfectant Contracts.

On March 21 the Vestry of Clerkenwell considered, amongst others, the tenders sent in for the supply of disinfectants for the ensuing twelve months. There were only three tenders sent in—viz., Messrs Adcock, Easton & Co., Charteris Works, Finsbury Park; Messrs. Adams, Webster & Co., Hackney; and Messrs. J. M. Smith & Co., Borough Road. The respective prices were:—Messrs. Adcock, Easton & Co., 95 per cent. of clear carbolic acid fluid, free from tar oils and sulphuretted hydrogen, 1*s*. 1*d*. per gallon; 70 per cent. of carbolic acid, dissolved in caustic soda, and free from tar oils and sulphuretted hydrogen, 10*d*. per gallon; 15 per cent. of carbolic disinfecting-powder, free from tar oils and sulphuretted hydrogen, 3*s*. 10*d*. per cwt. Messrs. Adams, Webster & Co., exactly the same prices—viz., 1*s*. 1*d*., 10*d*., and 3*s*. 10*d*.; and J. M. Smith & Co., 1*s*. 6*d*., 1*s*. 3*d*., and 6*s*. Mr. Harper: Is there any method of testing these disinfectants to prove them to be of the strength stipulated? The Clerk: There is a very stringent clause which says that every sample shall be analysed, and in the event of its being found wanting the contractor will pay the costs of the analysis, and also for the inconvenience the Vestry may be put in procuring the disinfectants elsewhere. Mr. Hanly: Have Adcock, Easton & Co. supplied us before? The Clerk: They are the present contractors. Mr. Hanly: Have they given satisfaction? Mr. Putterill (Chairman of the Public Health Committee): Yes; every parcel they have sent in has been tested by the public analyst directly it was delivered. Mr. Hanly: I move Adcock, Easton & Co. Mr. Putterill: I second it. Carried unanimously.

At the meeting of the Holborn Board of Works on Monday, the Sanitary Committee recommended that the tender of Messrs. Adcock, Easton & Co., Finsbury Park, be accepted for the articles for which they had tendered, and having regard to the fact that no tenders had been received for the supply of Sanitas and Sanitas powder, the supplies of those articles be obtained from the Sanitas Company at the prices quoted in their letter to the Board. The report of the committee was unanimously adopted.

Messrs. Gatward & Wright, chemists and druggists, of Yeovil, have secured the contract for the supply of disinfectants to the Yeovil Union Workhouse.

#### Soap Contract.

At the meeting of managers of the Central London School District, held at the offices of the City of London Union, Bartholomew Close, E.C., on Monday, tenders were opened for the supply of soap to the Poor Law schools at Hanwell for the ensuing six months. The tender of Messrs. Knight & Co. was accepted for 202*l*. 13*s*. 8*d*.. The following are the details of the accepted tender:—Brown, John Knight's, good strong, stamped with maker's name, 30 cwt., 17*s*. per cwt.; or pale yellow ditto, 30 cwt., 17*s*. per cwt.; or primrose ditto, 30 cwt., 19*s*. per cwt.; BBB soft soap ditto, 150 firkins, 12*s*. per firkin; toilet, curd, 55 lbs., 4*d*. per lb.; ditto, tablet, 4 boxes, 2*s*. 6*d*. per 7-lb. box; carbolic, Calvert Company's No. 5, 4 per-cent. acid, 1-lb. bars, 30 cwt., 16*s*. per cwt.; ditto, ditto, domestic soap, 8-per-cent. acid, 1-lb. bars, 10 cwt., 16*s*. per cwt.

#### The Half-holiday.

The chemists and druggists of Ruxwood will close their establishments at 2 P.M. each Thursday from April 4 during the summer months.

The chemists of Wiveliscombe will close at 2 P.M. each Thursday, instead of at 4 P.M. as heretofore.



### Obstructing the Highway.

Mr. Albert Archer, chemist and druggist, Plainmoor Terrace, St. Mary Church, was summoned at Torquay County Petty Sessions, on March 20, for unlawfully and wilfully obstructing the free passage of the highway for a long and unreasonable time on March 8. Defendant pleaded guilty. P.C. Hill stated that he saw fourteen boxes, five hampers, and an empty cask in a lane at the back of Plainmoor Terrace, about noon. He did not tell defendant about them, thinking that they would be taken away. They, however, remained there from Friday until Monday evening, and on Sunday he told Mr. Archer to remove them. Mr. Archer pleaded that they had not been taken in on account of the weather. The Bench imposed a fine of 7s. 6d., including costs.

### Unjust Scales and Unstamped Measures.

At Carlisle Petty Sessions, on Friday, Mr. John Reay, chemist and druggist, of Rickergate, Carlisle, was summoned, under the Weights and Measures Act, for having in his possession for use in trade an unjust beam and scales. He was also summoned in respect to thirty-three unstamped weights on March 13. Defendant pleaded guilty. The Chief Constable stated that the dispensing-scales were 1 gr. deficient, but the weights were not in use. The Bench thought there was no intention to defraud, and defendant was fined 2s. 6d.

### Cyanide Poisoning.

The Exeter Coroner last week investigated the death of Albert Walter Restall, a dyer, and the conclusion arrived at was that he committed suicide by taking cyanide of potassium.

### Mistook Laudanum for Beer.

A brickmaker, aged 40, named Thomas Smith, of Leigh, went into his house by the back door late on Saturday night, went into the pantry, and in mistake for a bottle of beer seized a bottle containing laudanum and drank it. He died early the next morning.

### A Chemist's Two Daughters Killed in the Gale.

Lucy Light, aged 9 years, and a younger sister, aged 6 years, daughters of John Henry Light, chemist, 3 Rudgway Terrace, Upper Eastville, Bristol, were killed on Sunday last by the falling of a poplar-tree in the Fishponds Road. The two little girls had gone out for a walk with another little girl, named Dorothy Riddell. The younger of the sisters was killed on the spot when the tree fell and crushed them, and the elder was so much injured that she died an hour later. Dorothy Riddell was not much hurt. Mr. Light had gone to look for them, thinking the weather was too boisterous for them to be out, when he was met by someone carrying Dorothy Riddell home. At the inquest the Coroner and the jury expressed great sympathy with Mr. Light in his trouble.

### A Chemist Accused of Theft.

Alfred Bellamy, said to be chemist, and his wife were again brought up, on remand, charged (as reported in our last issue) with being concerned in stealing a clock, an overcoat, two salvers, and other articles of silver, value 40l., the property of Mr. John B. Martin, hanker, 17 Hyde Park Gate, Kensington. The evidence of the witnesses went to prove that the male prisoner was in possession of some of the stolen articles, and endeavoured to dispose of the salvers. In a second case, it appeared that the woman entered the service of Mr. Jules Moyse, of Bramley Hill, Croydon, on February 11, and absconded on the following Thursday, property of the value of 40l. being afterwards missed. At midnight on the same day a man resembling Bellamy left East Croydon Station in a train for Victoria, accompanied by a woman, who carried a portmanteau. It further appeared that Bellamy called for letters addressed "L. R.," left at a shop in Shaftesbury Avenue, and those were the initials which were in the advertisement which led to the engagement of Mrs. Bellamy. Mr. Curtis-Bennett granted a further remand.

### The Early-closing Committee.

The House of Commons Select Committee, to which Sir J. Lubbock's Early-closing Bill has been referred, met on

March 22, and took the evidence first of Mr. J. A. Stacey, secretary to the Early-closing Association, who said that in some districts the hours of business were worse than they were ten or even twenty years ago, but they were better in other districts. He was convinced that there was a strong desire on the part of shopkeepers for legislation. The Early-closing Association had an experience of fifteen years, and it was found that whilst voluntary early-closing had had effect with the wholesale houses and the large retail houses, it had made no impression on the smaller shops in the poorer districts. In the suburbs of London, taking the rank and file of the shops, the average hour for closing was 9.30. Evidence in favour of the Bill was also given by Mr. Horsman, secretary to the National Union of Shop Assistants, Warehousemen, and Clerks, Manchester; and by Mr. Sutherland, president of the North-western Grocers' and Provision Merchants' Association of Glasgow. Further evidence, also in support of the Bill, was taken on Tuesday, when Mr. C. A. Cooney, secretary of the Scotch Shopkeepers' and Assistants' Union of Glasgow, and Mr. T. W. Flint from the same organisation, and Mr. Edward Day, of Wakefield, honorary secretary of the West Yorkshire Federated Chamber of Trade, were heard. Mr. Frye and Sir Blundell Maple appear to lead the opposition to the Bill.

### Weights and Measures.

The Select Committee of the House of Commons on Weights and Measures sat on Tuesday, when Mr. H. E. Woolmer, Manchester, gave evidence. He gave it as his opinion that the difficulties in the way of a conversion to the metric system in this country would not be great. In Germany 3½ years' notice was given of the change, and it was found that at the end of two years even the working people were quite conversant with it. He spoke of the difficulties which Manchester merchants under the present system experienced in carrying on foreign trade. They had to sell according to metric weights and measures, and the necessary calculations involved a staff of clerks and additional expense as well as inconvenience. In this way, and also from the fact that a buyer preferred to buy from a merchant who dealt with the same weights and measures as himself, British trade was handicapped. Foreign merchants were not slow to make use of this advantage. The tendency of all trades was to get nearer to the consumer, and consequently large houses were obliged now to go to the retail consumer or buyer abroad, whereas formerly, when competition was not so keen, it fell into the hands of the middleman. The necessity for a change of standard was intenser now than thirty years ago, because so many more countries had adopted the metric system, and also because of the increasing keenness of competition. Mr. A. J. Street, chief inspector of weights and measures for the City of London, gave evidence as to the present use of the metric system within the City and the difficulties which would probably attend its general adoption. He found that some large wholesale dealers, especially those transacting business with foreign merchants, greatly approved of the metric system, and that they practically used it in their business. They received a great many of their goods invoiced on the metric system, and converted the figures into avoirdupois according to their requirements in this country, and conversely rendered avoirdupois into the metric system when exporting. In his opinion, there were a great many wholesale houses and a number of bullion merchants who would welcome the metric system, but, on the whole, the retail traders were very much against it.

### Fires.

On Monday evening last week, a fire broke out at Baxter's Chemical-works, Parr, near St. Helens, which resulted in the destruction of the roof of one of the sulphur houses. It was supposed the fire was caused by the over-heating of the sulphur in the house.

On Wednesday morning, shortly before 12 o'clock, a fire broke out in the back premises of the shop occupied by Messrs. Dixon & Co., chemists and druggists, Exchange Walk, Nottingham. Some turpentine had accidentally caught fire, but it was extinguished by the employés before the arrival of the fire-brigade.

At the chemical-works of Mr. John Lewis Major, Wincolme, on Tuesday evening last, a large number of casks, con-



taining various inflammable liquids, were found to be on fire in the yard. The surrounding buildings contained valuable machinery, but the fire-brigade were successful in confining the damage to the casks. The fire originated through a lighted lamp carried by the night foreman.

### Three Chemists in One Poisoning.

An inquest has been held touching the death of a young man named Joseph H. Moon (20), packer at a tobacco factory in Hull, who left his work on Thursday last week. He was found on Monday last lying dead in what is known as the Sand Pit at Preston in Holderness. He had poisoned himself with carbolic acid and chlorodyne. A loaded revolver lay by his side, and in his pockets were found, among other things, one bottle of carbolic acid three parts full, labelled as such, and having the address, "G. R. Fisher, chemist and druggist, 5 North Bridge, Hull"; another bottle nearly empty, labelled "Carbolic Acid," with the address on it of "Edward Ryley, 23 Lowgate, Hull"; one small bottle marked "Chlorodyne—Poison," the label bearing the name of "L. M. Billamy, Pharmacy Buildings, near Southcoates Station," which contained about half-a-teaspoonful of liquid; a box of cartridges, and a razor.

Edward Ryley, 23, Lowgate, Hull, chemist and druggist, said that the deceased man went twice to his shop last week—on Monday and Thursday morning. On Monday he purchased 6d. worth of pure carbolic acid. Witness did not think it necessary to ask for what purpose the man required it, it being used very commonly both for trade and domestic purposes. The same quantity was now in the bottle as he sold him. The deceased on the Thursday morning again purchased 6d. worth of pure carbolic acid. One day during the week he served the deceased with 3d. worth of chlorodyne.

Lawrence Marshall Billamy, Pharmacy Buildings, Hull, chemist and druggist, deposed to selling the deceased  $\frac{1}{2}$  oz. of chlorodyne on Friday last. There was very little left in the bottle now produced, and the difference would be quite sufficient to cause death. There was nothing peculiar about the deceased when he made the purchase.

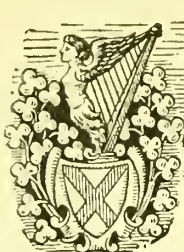
Dr. Jackson, of Hedon, said he had made a *post-mortem* examination of the body, and found that death had resulted from carbolic acid and narcotic poisoning. There was carbolic acid in the stomach, and he believed morphia as well, which was the principal component of chlorodyne.

The jury returned a verdict of "Suicide whilst temporarily insane."

### A Chemist's Claim.

At the Leeds Assizes last week, before Mr. Justice Kennedy, George Nicholas Chadwick and Arthur Chadwick, chemists, 105 North Street, Leeds, sued Robert Wilson Shackleton and Sarah Elizabeth Chadwick, of Otley, Sophia Briddon, of Methley, and Henrietta Wilson, of Keighley, claiming from each the return of 156l. 9s 8d., alleged to have been paid on the wrongful representation that each was the legitimate child of George Chadwick, deceased, and interest on those amounts. It was stated that a Mr. George Chadwick, who died in 1870, left a will, of which the plaintiffs are the present trustees; the testator left his estate to his seven nephews, all of whom were now dead, except one. It was in respect of the children of the nephew, George, that the present action arose. Legacies had been paid to the present defendants, but the trustees now alleged that no record of the marriage of their parents could be found, and they therefore contended that the money had been paid in mistake. The defendants asserted, on their part, that there had been a marriage, and that although the certificate was lost the marriage was a well-known fact, and a matter of common reputation. His Lordship said it rested with the plaintiffs to show that the money had been paid by mistake of fact, and he thought that the evidence adduced to show that the parties were not married was entirely insufficient. Judgment was given for the defendants, with costs.

IODIDE-OF-IRON syrup is an international difficulty. Kremel has pointed out that the strength varies from 0.052 per cent. of  $\text{FeI}_2$  in the Greek syrup to 20 per cent. in the Dutch. An American buying the syrup at home gets it 10 per cent., when he comes to England 5.7, France 0.5, Italy 0.61, Germany and Russia 5 per cent., and it is only when he strikes the fraud and free Hungarian that he gets it as at home.



## Irish News

### Drug Contracts.

At a meeting last week of the Bandon Board of Guardians, tenders for medicines and drugs were reported from Messrs. Kiloh and Co., Cork, Messrs. Harrington & Son, Cork, and Messrs. Hunt & Co., Dublin. Messrs. Kiloh's tender was 12½ per cent. lower than the others, except that they omitted to quote for cod-liver oil, of which a large quantity is used. It was decided to accept Messrs. Kiloh's tender, provided that their charge for cod-liver oil did not exceed 4s. 4d. per gallon, the price quoted by the other candidates.

Messrs. J. Gilbert & Co., chemists and druggists, Ennis, co. Clare, have been appointed contractors for drugs and medicines to the Tulla workhouse and three dispensaries for the ensuing year.

The Londonderry Board of Guardians have appointed Messrs. Galbraith & Co. as contractors for drugs and medicines during the ensuing year.

Tenders for a year's supply of drugs and medicines, surgical and medical appliances, are required by the following public boards, on or before the dates mentioned:—Athlone workhouse and five dispensaries, March 30; Lismaskee Union and several dispensaries, April 6; Mitchelstown workhouse and four dispensary districts, April 4; Schull Union and two dispensaries, April 2; and Stranorlar workhouse and three dispensaries, April 1. The usual contract regulations obtain.

### A Cancer Cure.

The following appears in the advertisement columns of the *Freeman's Journal*:—"To doctors and surgeons; a certain cure for cancer can be had for a reasonable sum."

### No Patriotism in Drugs.

The Cork Board of Guardians have decided to prefer Irish manufactured goods in preference to English or continental articles, provided the cost is not appreciably greater. An exception is, however, made as regards drugs and chemicals, owing to the necessity of getting some of these from abroad.

### Irish Poor-Law Appointments.

A general protest is being made by the apothecaries, dispensary officers, and pharmaceutical chemists in Ireland against the prevalent system of requiring candidates for the service to attend personally on the day of the election. The so-called elections are often merely *pro forma*, and as it is pretty generally known beforehand that so-and-so will probably be elected, it is not only unfair, but insulting to the candidates to bring them often from long distances, and then array them like a class of schoolboys.

### Comments on the Coroner.

Dr. Kenny, apothecary, coroner for Dublin, has issued a writ in an action for libel against the *Irish Figaro*. The libel complained of was contained in a comment of the *Figaro* on the conduct of the plaintiff at an inquest held some weeks ago in the city.

### Doctor and Contractor.

At a recent meeting of the Youghal Board of Guardians Mr. Fuge moved a resolution that the Board did not approve of Dr. Twomey combining the office of dispensary officer and drug and medicine contractor to the Union. There was a rule that no paid officer of the Board could be a contractor. When the contract was given to Dr. Twomey there was a tender 60 per cent. lower from Messrs. Harrington, of Cork. After a discussion a letter was read from Dr. Twomey pointing out that when he was appointed temporary medical officer he found the supply of medicine quite inadequate, and he had been put to considerable expense in supplying medicine to the dispensary patients. He had spared the Union the



cost of the medicines, and had given the use of his medical appliances. An amendment was carried approving of Dr. Twomey's appointment.



## Scotch News

### Suicide of a Doctor.

Dr. John Mackie, Brechin, has committed suicide by taking prussic acid. The other morning he went into a chemist's shop for an ounce of the acid, which he said was for killing a dog. There was nothing peculiar in the doctor's appearance or actions, but the assistant who supplied him with the acid was somewhat startled by the doctor asking him how much of the drug it would take to kill a man. The assistant, having his suspicions aroused, requested the return of the acid, but without effect. He followed the doctor to his house, and then went and informed the coachman of his suspicions. Together they made their way up to the doctor's room. They found the door locked on the inside, and, bursting it open, saw the doctor in the act of drinking something out of a tumbler. The chemist at once knocked the tumbler out of the doctor's hand, but not before he had drunk the greater part of the contents, which were evidently the prussic acid. Dr. Mackie soon expired. He had been in bad health.

### A Chemist's Extra.

Mr. D. J. McKinnon, a Dundee chemist, has become the owner of the iron screw-trawler "Sunbeam," which will be one of the first to go a-fishing from the port of Dundee.

### Inverness Pharmacy.

The members of the Inverness Chemists' Assistants' and Apprentices' Association supped together at the Palace Hotel on Thursday, March 21, Mr. J. Bethune in the chair. In the course of the evening, Mr. L. McLeod spoke of the good work the members had done in the course of instruction which had been arranged for them in the local School of Science and Art. After the toast-list had been disposed of, a well-arranged musical programme was gone through, in which members of the Association took an important part.

### Edinburgh District Chemists' Trade Association.

A meeting was held in the Pharmaceutical Society's House, 36 York Place, Edinburgh, on Thursday, Mr. Peter Boa in the chair. Mr. J. Rutherford Hill was elected an hon. member, and Mr. W. Charles Baker, 13 Dundas Street, was admitted to membership. A discussion ensued as to whether the Association should send out a circular to medical men on the subject of prescribing proprietary medicines, which it was agreed by a considerable majority to do so. The meeting then went over and adjusted a circular drafted by the committee. Messrs. J. A. Forret and R. L. Hendry were appointed auditors, and it was remitted to the committee with powers to make inquiries as to a suitable place for the annual picnic and report to next meeting.

## French News.

A DINNER is to be given on April 4 in honour of M. Berthelot, the chemist. The object is to show gratitude for his successful efforts to advance scientific knowledge and free the human mind. M. Brisson will take the chair, and M. Poincaré will act as vice-chairman.

OVATION TO A PROFESSOR.—On commencing his botany lecture last week at the Paris School of Pharmacy, Professor Guignard, the newly elected member of the Academy of Sciences, was the object of a friendly ovation on the part of

his pupils. The applause was very enthusiastic and lasted fully five minutes. The lecturer thanked his audience warmly for their mark of appreciation. At the end of his discourse the students recommenced cheering the popular professor.

THE PROPOSED NEW PHARMACY LAW.—A commission composed of members of the French Chamber of Deputies has been named to examine the text of the new pharmacy law as adopted by the Senate. This committee consists of eleven members, in which doctors figure with a majority of six; there are only two pharmacists. One of the members is a doctor and professor at the Paris School of Pharmacy, another is a veterinary surgeon, and independent trades and professions are represented by a paper manufacturer.

A CONGRESS OF PHARMACEUTICAL SOCIETIES was held recently at the Paris Superior School of Pharmacy. M. Petit was elected president, M. Soisy vice-president, and M. Crinon secretary. The meeting rejected by a majority of 11 votes, out of a total of 425, a proposition for the total suppression of pharmaceutical specialties. On the other hand, a suggestion that the Congress should proscribe secret remedies was unanimously adopted. Views were also expressed against authorising pharmacies to be established in the form of limited liability companies, and in favour of the suppression of the diploma of pharmacien of the second class after a lapse of five years.

DOUBTFUL BREAD.—About a week ago Dr. Sapelier, one of the physicians attached to the Nanterre Asylum, near Paris, noticed certain abnormal symptoms amongst some of the inmates, attributed by him to poisoning due to ergot of rye, which he thought was contained in large quantities in the bread supplied to the institution. As, however, the noxious properties of the ergot should disappear if the bread were properly baked, the doctor considered he had double ground for complaint and addressed the Prefect of Police on the subject. The latter had samples of the rye submitted to M. Girard, Chief of the Paris Chemical Laboratory, for analysis, but he has been unable to find any trace of ergot in the flour. Dr. Sapelier persists nevertheless in his opinion, in spite of the chemical analysis, and consequently the prefect has submitted the matter to the permanent committee of epidemics, composed entirely of doctors, upon whose decision action will be taken. M. Girard has explained that the samples of flour were not obtained by his assistants or himself from the Asylum, but were merely forwarded to him. Consequently, although he is sure of the result of the analysis, he cannot answer for the genuineness of the samples.

PARIS DISPENSARIES.—During recent years a number of dispensaries have been established in the poor quarters of Paris by private initiative, and assisted by members of the Municipal Council. The consultations, supplies of medicaments, &c., are free at these institutions, and the result has been to relieve the hospitals of numerous patients suffering only from slight maladies. One of these dispensaries recently erected in the Boulevard des Italiens may be described. On arriving, the patient receives a slip on which his name is inscribed, and on which the doctor will note his diagnosis, the medicines prescribed, &c., and it is afterwards classed for reference on future visits. After this formality the patient is conducted to one of the special medical services—either to the physician, surgeon, oculist, &c., according to the needs of the case. Each practitioner has a private room at his disposal for slight operations, &c. After the consultation the patient goes to the pharmacy, where the medicaments are supplied immediately. To this section a small room is attached for maladies of the nose, ears, &c. Here also is a small crematory-stove for destroying bandages or anything that may be cast off by the patient. There likewise exists a complete system of medical, shower, and other baths on the latest hygienic principles.

THE SERUM TREATMENT.—The Pasteur Institute has issued an interesting series of instructions in connection with the use of anti-diphtheric serum. It is explained that the product retains its properties if kept in a slightly elevated temperature, well protected from the light, but the serum becomes inactive if heated above 122° F. In order to ensure it keeping, a minute quantity of camphor is added. Its use is suggested as a preventive by persons exposed to the risk of contagion in a dose of 5 c.c., and by this means



immunity is supposed to be secured for a period of from four to five weeks. In its therapeutic action the serum is stated to cure a diphtheria patient if the malady is not too far advanced. Discretion is necessary in deciding the dose necessary, which should vary according to the age of the patient, the intensity and length of the malady, &c., from 5 c.c. to 10 c.c. at the outset, 15 c.c. to 20 c.c. if the case is severe or has been running for several days. Exceptionally, as much as 30 c.c. or more is suggested in very serious cases, especially when tracheotomy is necessary. The injection of a comparatively strong dose is recommended as better than several injections of slight doses. The injection should be made in the loins with all the necessary antiseptic precautions, and care is necessary to see that the serum has remained limpid. Amongst the inconveniences of the serum treatment are eruptions, painful articular swellings, and symptoms of fever. Adults are more subject to these than children, and they are usually only of short duration, and so far no serious injury has been noticed in them.

## Foreign and Colonial News.

**DOCTOR OF PHARMACY.**—Senator Cantor's Bill, authorising the New York College of Pharmacy to confer the degree of Doctor of Pharmacy and to increase its holdings to one million of dollars, has passed the Senate.

**AMERICAN DRUG CONVENTIONS.**—The next convention of the American National Wholesale Druggists' Association will commence on September 2 next. The retailers begin their annual conclave at the same place on August 14. It has been suggested that both meetings be held at the same time.

**"NO JEWISH STUDENTS NEED APPLY."**—It is well-known that a Russian law, enacted several years ago, provides that the number of Jews admitted to the Russian Universities shall not exceed a definite proportion of the entire number of students. It has been reserved for the enlightened rule of the present Tsar to apply in all its rigour this law, which has hitherto been allowed to remain in abeyance. At the opening of the January term at the University of Yurjeff (Dorpat) a large number of Jewish applicants for admission, among them several pharmacists, were rejected on the ground that the Jewish quota was already complete.

**ECONOMY BEFORE EFFICIENCY.**—The Sanitary Board of St. Petersburg have sent round a circular to the medical men appointed by the City Government to visit the poor which has caused considerable indignation among these physicians. The document points out that in 1894 the post on the City Budget providing for the medical service to the poor has been exceeded by the actual expenditure to the extent of 2,500 roubles, on account of the frequency which the poor doctors visit their patients, and the freehandedness with which they order medicaments. The city pays its official physicians 30 copecks for every visit made by them to the poor, and the medicines prescribed are supplied at the public cost. The circular now directs the doctors that in future they "shall only pay visits to indigent patients in cases of extreme necessity; that they shall prescribe the cheapest remedies; and that their prescriptions shall be as simple as they can make them."

**SUBLIMATE FOR ANTIPYRIN.**—On November 10 last, a Mr. Böttcher, a law-student from Magdeburg, ordered six antipyrin powders at Dorn's Pharmacy in Freiburg in Baden. After taking a few of the powders Mr. Böttcher died of mercurial poisoning. It was found that two of the powders supplied to him had been corrosive sublimate instead of antipyrin, and a prosecution for manslaughter was commenced against Apotheker Hugo Dorn, the proprietor of the pharmacy, Mr. Paul Traub, his assistant, and Kurt Kruse, his apprentice. In the course of the proceedings it transpired that so-called antipyrin powders had been repeatedly supplied to customers, from the same bottle which had contained Mr. Böttcher's fatal dose, in the course of a few days preceding that gentleman's death, and that several complaints had been made at the pharmacy of toxic symptoms having overtaken the customers who had used these powders. Apotheker Dorn had examined a few of the powders which were returned by

purchasers and declared them to be good. It was also shown that four days after Böttcher's death, Assistant Traub, upon examining the antipyrin-bottle, discovered in it crystals of a foreign substance, which was afterwards recognised as corrosive sublimate. He acquainted Mr. Dorn of the fact, but the latter appears to have taken no special notice, any more than he had done when the complaints from customers and the news of Böttcher's death reached him. The trial of the three accused, on March 14, resulted in Apotheker Dorn being condemned to one month's imprisonment and a fine of 100m., and Assistant Traub (who had been left in charge of the shop during the accidents) to two months' imprisonment and 30m. fine. The apprentice Kruse was acquitted. No definite information as to how the antipyrin came to be mixed with sublimate was obtained at the trial; but a young man of the name of Frowe, who had been in Dorn's employ as an apprentice, and who was called as a witness, compromised himself in the box to such an extent that he was arrested in court. He is supposed to have mixed the sublimate with the antipyrin as a "joke," and evidently knew that sublimate had been given to the unfortunate Böttcher, for before that man's death was known he boasted of the substitution to an acquaintance. He had also previously been caught in the act of pouring tinct. cantharid. into a friend's beer.

## Business Changes.

**MR. MASON**, late of West Brighton, is opening a first-class pharmacy at the Broadway, West Norwood.

**MR. BECKWITH** has purchased the chemist's business of Mr. Mason, Church Road, Hove, West Brighton.

**MR. TEMPLE**, chemist, from Torquay, has purchased the chemist's business of Mr. Routly, at South Street, Eastbourne.

**MR. W. WELLS**, of 152 Camberwell Road, S.E., has disposed of his business at that address to Mr. W. E. Hailstone.

**MR. STRICKETT**, for many years in St. George's Road, Peckham, S.E., is opening a chemist's business at 16 Sumner Road, Peckham, S.E.

A NEW branch-establishment has been opened at 53 Hope Street, Hanley, by Mr. Cornwall, chemist and druggist, 14 Piccadilly, Hanley.

A NEW chemist's business has been opened at Lewisham, under the style of the Loampit Drug Company (Limited), Loampit Vale, Lewisham, S.E.

**MR. TOM WILLIAMSON**, late with Messrs. Stacey, Corbyn & Co., has purchased from Mr. David Vaughan his old-established business at The Cross, Oswestry.

**MR. CHARLES J. GRIFFITHS**, chemist and druggist, formerly of Kingston-on-Thames, is opening a pharmacy at Devonshire Road, Bexhill-on-Sea.

**MR. F. W. PLAYFORD**, late of Burnt Ash Hill, Lec., has purchased the business carried on by Mr. E. A. Waddy, of Ripley, Surrey. The transfer was effected through Messrs. Berdoe.

A NEW chemists' and druggists' business has been opened at 35 Market Place, Kingston-on-Thames, by Parke's Drug Stores, Limited, of London, Lewisham, Peckham, Balham, and Hammersmith.

**MR. ALBERT E. MARSHALL**, late assistant to Messrs. Alfred Bird & Sons, of 10 Worcester Street, Birmingham, has purchased the business lately carried on by Mr. A. S. Driver, of 7 Bird Street, Lichfield.

**MR. THOMAS BEECHAM** has retired from the firm at St. Helens which has for many years been carried on under his name. The business will be carried on by his son, Mr. Joseph Beecham, under the same style as heretofore.

**MR. F. E. CARPENTER**, of Burnham, Somerset, last week moved into his new premises, The Royal Pharmacy Stores, which he has built adjoining his residence, 1 Royal Parade. The shop has been new fitted, and is a great improvement on the old one.



## Pharmaceutical Society of Great Britain.

### NORTH BRITISH BRANCH.

AT the evening meeting, held in Edinburgh on Friday, March 22, Mr. J. Laidlaw Ewing in the chair, the chief business was the discussion on the proposed Imperial Pharmacopœia, following on the paper on the subject read by Mr. Dott at the previous meeting. Before that was proceeded with, a paper on the

#### DECOMPOSITION OF ALCOHOL-REDUCED CHLOROFORM,

By D. Brown, F.C.S., and D. Rainy Brown,

his son, was read by the latter. The paper was controversial mainly, and dealt with certain statements made by Carl Schacht and Biltz to the effect that decomposition-products cannot be detected in alcohol-chloroform until all the alcohol is decomposed. These products, they say, are ethyl chloride and phosgene alcoholide. The authors of the present paper do not share these opinions, and they attributed Schacht and Biltz's conclusions to erroneous inference from experiments, while they showed from their own experiments that trained noses have not hitherto succeeded in detecting any difference in the odour of decomposing chloroform until zinc iodide and starch reacts. If 0.1474 per cent. of chloroformic ether and 0.2629 per cent. of ethyl chloride are produced from a chloroform containing 0.25 per cent. of alcohol, a product is obtained which can be at once condemned, because of the presence of foreign odours; the quantities may even be reduced one-fourth without rendering the task of detection a difficult one. The decomposition-products (represented as chlorine) required to convert 0.25 per cent. of alcohol into ethyl chloride and chloroformic ether should, according to Schacht's theory, be 0.192 per cent. = 0.776 per cent. AgCl. So soon, therefore, as decomposition is detected by zinc iodide and starch, this quantity of chlorine should be obtained by decomposing the products. The authors have not, however, succeeded in obtaining anything like this quantity, and generally their results convince them of the erroneous nature of the German conclusions.

Mr. D. RAINY BROWN then inaugurated the discussion on the

#### IMPERIAL BRITISH PHARMACOPŒIA.

On behalf of his father and himself he submitted the following characters and tests as those most suitable for insertion in the Pharmacopœia under

#### CHLOROFORM.

CHCl<sub>3</sub>, a colourless mobile liquid, of sweet ethereal odour; sp. gr. not under 1.497 at 15° C.; soluble in all proportions in alcohol and ether, and in about 200 times its volume of cold water. Tests—(1) When distilled, the first 10 per cent. fraction and 15 per cent. residue should be free from colour and foreign odour, and the weight of the 15 per cent. residue, after evaporation at 32° C. [1 ED.] till constant, should not exceed 1 in 900 000 parts (by weight). (2) On shaking with 10 per cent. (by volume) of pure concentrated sulphuric acid for twenty minutes the acid should remain colourless, or nearly so; and on diluting with water (3 volumes) the mixture should remain almost colourless and clear, and give off only a slight foreign odour. (3) On shaking with an equal volume of zinc iodide and starch solution (zinc iodide 1 part, starch 3 parts, water 500 parts) no colour should be imparted to the chloroform. (4) On shaking with an equal volume of silver-nitrate solution no turbidity should be produced. (5) A water-extract of the chloroform should be neutral to litmus.

The authors were of opinion that the method of preparing chloroform should be left to manufacturers, and they condemned the addition of so much as 1 per cent. of alcohol. They submitted the reasons for the tests given above. Mr. D. R. Brown also communicated a note on

#### ALCOHOL,

in which he showed that the B.P. statement about this body being insoluble in ether is wrong. Almost 99 per cent. of it

is soluble in anhydrous ether; moreover, it is only sparingly soluble in cold and boiling water—not "freely" in the latter, as the B.P. states.

#### OINTMENTS.

Mr. PETER BOA took up this subject. In his experience only about a third of the official ointments are commonly prescribed; and from inquiry he found that his experience was not exceptional. He proceeded to discuss the probable causes of this neglect of so many of the preparations, pointing out that *ung. acid. carbolic.* contains the acid in crystals because it is only partially soluble in the basis. Aconitine, atropine, and veratrine ointments are highly poisonous and dangerous, and have largely been replaced by preparations of cocaine and menthol. Calamine is inferior to oxide of zinc in ointment; creosote is efficiently and pleasantly replaced by carbolic acid; glycerine and subacetate of lead ointment is meant to be soothing, but any soothing effect which the lead may possess is neutralised by the irritating nature of a paraffin basis. Elemi, resin, savin, and turpentine ointments are relics of a style of practice now in disuse by the best practitioners. Spermaceti and simple ointments are not now so much in use as they have been, the benzoin in the former spoiling it for ophthalmic use; and the readiness with which the latter becomes rancid has brought it into disfavour. The author considers that the official bases are not quite satisfactory. Most of them become rancid, and the paraffins are not always bland, but *adepts lane* under certain conditions promises to be a good basis. He is not disposed to regard with favour one common basis. There might be a classification of certain ointments as regards strength and basis. Those which contain insoluble and not very potent substances might be of uniform strength and made with a paraffin basis, while those with soluble active ingredients, like carbolic acid and eucalyptus, might be made alike in strength and fatty basis. If there were a basis in which the active ingredient is soluble, that basis should be chosen for it, unless objectionable in some other way. In all the official ointments the ingredients of which are melted together, the directions are to stir till cold. The author has shown that in many of them this is unnecessary and in some objectionable. Briefly, a stirred ointment is more liable to become rancid than one allowed to cool at rest. A basis of some non-fatty substance which would wash off with water without soap might be useful. Tragacanth, starch, dextrin, and gum acacia, either alone or together, might be employed. Some more compound ointments of the sort in use now should be introduced. The compound ointments at present official are among the most useless in the book. Bismuth, cocaine, and menthol ointments are now much used in practice, and he suggested their recognition.

#### INFUSIONS.

by Mr. WM. LYON, was the next topic. Mr. Lyon thinks these preparations owe their prominence to the partiality of a few, and because they are relics of an ancient art. He advanced the pharmacæutic objections to infusions, chief of which is that in making them 20 to 25 per cent. of the value of the drug is not extracted. There are twenty-eight infusions in the B.P., and in no other Pharmacopœia do they occupy so much space. The German and Swiss Pharmacopœias have only one each.† The United States Pharmacopœia has, strictly speaking, three, the fourth being equivalent to mist. *sennæ* co. Mr. Lyon proceeded to examine the claims of the B.P. infusions for retention, his remarks being based on Martindale's analysis; then he divided them into aromatic and non-aromatic groups, and talked about each one. They may be further classified in two lots, which we collate from his critical remarks.

*To be Rejected.*—Aromatics: Infusa *antheridis*, *aurantii* co., *caryophylli*, \**cascarillæ*, *cuspariæ*, \**lupuli*, *rosæ* acid., *serpentariæ*, *valerianæ*. Non-aromatics: *Catechu*, *chiratae*, *cusso*, *ergotæ*, *jaborandi*, *krameria*, *lini*, *rhei*.

*To be Retained.*—Aromatics: Infusa *aurantii*, *bucho*, *gentianæ* co. Non-aromatics: \**Calumbæ*, *cinchoræ* acid., *digitalis*, *maticæ*, \**quassia*, *senegæ*, \**sennæ*, *uvæ* ursi.

† It should not be understood from this that infusions are less used in Germany and Switzerland than in England. The opposite is the case, and there are few apothekes in which infusions are not always on the hob. The Pharmacopœias give one general formula.—*Ed. C. & D.*



About those which are marked with an asterisk Mr. Lyon's remarks are doubtful, but we have placed them in the lots which we judge he intended. About each of the infusions he had something to say, and generally, in regard to those to be rejected, the idea he put forward was that liquid extracts or tinctures of the same drugs would give more satisfactory extempore dilutions than the fresh infusions. He also showed that the further reduction of the period of infusion to a half would not be disadvantageous, the loss of extractive matter thereby being comparatively slight.

## PILLS

were next taken up by Mr. J. INNES FRASER. In the first place Mr. Fraser recommended that *conf. rose* should be deleted, syrup taking its place, and the B.P. might direct a definite weight of powdered ingredients *plus* excipient to be made into a definite number of pills. It would be an advantage to have a short note on pills preceding the section in the Pharmacopœia, giving general details as to the various coatings and other matters. As the following are seldom if ever used, they should be deleted:—*Pil. aloes barb.*, *aloes soc.*, *cambogiæ co.*, *conii co.*, *ferri carb.*, *hydrarg. sub-chlor. co.*, and *scillæ co.* The following formulae might be improved:—

*Pil. Aloes et Asafetide.*—Syrup a more suitable excipient.

*Pil. Aloes et Ferri.*—The quantity of aromatic powder seems absurd. A minute quantity of gingerin might do as well.

*Pil. Aloes et Myrrha.*—Syrup is the best excipient. Is saffron of any benefit?

*Pil. Colocynthis Co.*—Water makes the best mass.

*Pil. Ferri Iodidi.*—The number of pills should be distinctly stated, and it might be added that the pills should be varnished.

*Pil. Ipecacoe Scilla.*—Use syrup as an excipient.

*Pil. Phosphori.*—A modification of Martindale's formula was suggested.

*Pil. Plumbi c. Opio* and *Pil. Rhei Co.* should be massed with syrup.

*Pil. Saponis Co.*—It is questionable if this ought to be retained. Certainly the synonym *pil. opii* should be dropped.

*Pil. Scammon Co.*—Is there any advantage in making a solution and evaporating? Gingerin would answer the same purpose as the tincture of ginger.

*Pil. Ferri.*—The water is usually unnecessary.

Regarding the adding of new formulae, if frequency of usage is any criterion as to the pills which should be in the Pharmacopœia, one might suggest a simple opium pill containing 1 gr. powdered opium in each; also a podophyllin pill, which seems to be in very general demand. Another containing calomel combined with an aperient might take the place of the present *pil. hydrarg. subchlor. co.*

Dr. TILLIE said he particularly objected to carbolic acid in ointment, because it acts as a local anæsthetic and sometimes destroys the tissues. Speaking of mercurial ointments, he suggested that *ung. hydrarg. ammon.* should be deleted, also all mercurials combined with *ung. ceracei*, because they decompose. With regard to infusions, he said it was quite common for a physician to write a prescription "Infusio so-and-so"; it was equally common for a patient not to get it, the chemist and druggist having quite illegally dispensed something containing alcohol. Of course, one might put it down as a trade practice which covered a multitude of sins. He thought it would be very proper to introduce "Infusum so-and-so recens" and "Infusum so-and-so concentratum," or something of that sort, to get over this difficulty; but it was highly improper to dispense a for  $\lambda$ , and the earliest possible step should be taken to put chemists and druggists on a legal footing in the dispensing of these preparations. Mr. Lyon had said infusions often rapidly decomposed. Dr. Tillie thought it was one of the most important features in infusions, because if there was any form of wickedness that patients were more addicted to than another it was in keeping bottles of medicine too long. If bottles were guaranteed to explode after one week it would be a very great advantage to the patient. He had a strong objection to the deletion of *pil. saponis co.* When one wanted to conceal from the patient that he was taking opium, he knew no happier method than by prescribing *pil. saponis co.*

## EXTRACTS.

Upon this class of preparations Mr. W. SWAN offered some remarks, which were practically a summary of hitherto recorded reasons for rejecting and revising some extracts. He also desired to see formulae for the following introduced into the Pharmacopœia—viz:—*extracta bynes*, *bynes liquidum*, *convallariæ liquidum*, *euonymi liquidum*, *grinde-liæ liquidum*, *salicis liquidum*, *viburni prunifolii liquidum*.

## B.P. WATERS.

Mr. W. S. GLASS contributed the paper on this subject. Generally he suggested that the B.P. methods for preparing most of the aromatic waters should be abandoned, and a more uniform process adopted. Tests and doses should be given, and distilled water employed. Having referred to other Pharmacopœias and their methods, he gave it as his opinion that *aqua chloroformi*, not being a water, should be removed and placed among the liquors, and that *aqua laurocerasi* should be omitted, because it is dangerous on account of its uncertain strength, its liability to chemical decomposition, and its tendency to lose prussic acid. The introduction of *aqua caryophylli* to displace *aqua pimentæ* would be an advantage. He thought the best method for making the aromatic waters is maceration of the oil in hot water, with occasional agitation and filtration when cold through a double fold of white well-wetted filtering-paper. He had for a year or two adopted this process with peppermint, cinnamon, dill, and caraway, and the results had always been satisfactory. The waters possess the full flavour and strength of the oil and kept well. The strengths of all the waters ought to be uniform—1 in 500. The three waters prepared from the flowers are generally imported, but do not keep, and he suggested that *aq. flor. aurantii* should be prepared from *ol. neroli*, *aqua rosæ* from the otto, and *aqua sambuci* from the essential oil. Thus prepared they have a finer aroma and keep well. *Aqua camphoræ* should be made by shaking powdered camphor with hot water.

Dr. SELLARS, having informed the meeting that if he were to say all he could on this subject he would speak for the best part of a week, proceeded to tell his hearers why doctors use the B.P. title. It is because it is not systematised. He would like it to be systematised, meaning thereby that the substances should be grouped together. This would overcome lots of things; for instance, he thought the reason why some infusions are not ordered is that prescribers do not know they are in the B.P. He unfolded his ideas as to how the Pharmacopœia should be written, and dwelt upon the necessity of dispensers strictly adhering (in the matter of infusions, apparently) to pharmacopœial methods, the products of which are what the physician knows. He commended the B.P. to be as precise in regard to tinctures as the U.S.P. He would incorporate physiological tests where chemical ones were not suitable. Some suggestions he objected to because of the difficulty that would arise in teaching, and, speaking of proposed omissions, said a great many were due to the ignorance of their properties in the medical profession. *Canella alba* was an extremely useful substance, because of its pleasant odour and its strong taste in covering certain disagreeable substances one wished to administer in the form of bitter powders, but owing to the Pharmacopœia not being arranged in a definite form its properties were not so well known as they ought to be. One wanted the solubilities very much more fully put in than one of their speakers mentioned, not only in cold, but in hot, water. It is owing to the want of knowledge of the solubilities that such a large number of incompatible prescriptions are written.

Mr. A. J. DAY then read a paper on

## LINSEED MEAL.

This was an appeal for a more definite pharmacopœial standard. Basing his suggestion upon an examination of many commercial specimens, and comparison with foreign Pharmacopœias, Mr. Day submitted that the B.P. should define linseed-meal as linseed reduced to No. 20 powder, and should have appended to it the following characters and tests:—A dull, yellowish-grey powder; should be recently prepared, and free from unpleasant and rancid odour. The decoction, when cold, does not become blue on the addition of solution of iodine (absence of starch); does not give off



a pungent odour when treated with warm water (absence of cruciferous seeds), and when exhausted with carbon bisulphide should yield not less than 30 per cent. of oil, and when incinerated should yield no more than 6 per cent. of ash.

#### GENERAL NOTES.

Mr. J. B. STEPHENSON then spoke on several subjects. He questioned if the 1385 B.P. way of making acid. nitro-hydrochlor. dil. is good, or if *aqua regia* is formed at all, and he preferred the 1867 method of allowing the strong acids to stand together for a day.

*Emp. Belladonna* is too strong and too soft. Made 1 to 7 with resin-plaster, it is perfect.

*Ext. Cascara Liq.*—The bruised bark is exhausted readily and completely by percolation with cold water, allowing it to stand well moistened with a sufficiency of the water for twenty-four hours previously.

*Glycerin. Acid. Tannic.* is quite readily prepared in the cold. When heat is applied it is apt to become discoloured by keeping. The addition of 10 per cent. of water would be an advantage, which is also quite enough for *Glycer. Theriac.*

*Glycer. Tragacanth.* is too stiff. The gum should be reduced to about one half.

*Lin. Terebinth.*—The difficulty with this is a question of water, which should be q.s. "to make a thick cream with the soap."

*Liq. Calcis Sacc.*—It would be an improvement to order the sugar to be dissolved in the water, and then the lime to be added.

*Suppositories.*—In such as tannin, iodoform, and morphine, the quantity of medicinal ingredient is deducted from the oil theobrom. ordered. This is unsteady, because the mass so made will not yield twelve moulded 15-gr. suppositories.

*Syrups.*—Five per cent. more water is needed.

*Tinctures.*—As to the percolation process, perhaps in all cases the forty-eight hours might be changed to twenty-four, and a somewhat larger proportion of the spirit might be reserved for washing the marc; but he thought, on the whole, that as a general process it would be found to yield a more uniform and satisfactory result than any other. The process should not be ordered where there was a very small quantity of material to be operated on, as in the case of tr. capsici; nor was it suitable, or indeed possible, where the quantity was large or bulky, as in tr. lupuli; nor did he think it was suitable for tr. scillæ or tr. calumbæ, which should be made by maceration. Tr. iodi should be increased in strength to that of the old Edinburgh tinctures ( $\frac{1}{2}$  drachm to 1 oz.) after all that has been said about it. The application of heat should also be omitted in tr. quin. and tr. quin. am. It is quite a blot to have it mentioned. He would be very chary in adopting any spirit weaker than proof for tinctures. Before doing so he thought it would have to be proved conclusively not only that the tincture so prepared is better, but also that it is equal in keeping properties to that made from proof. The value of a tincture as a pharmacopœial preparation consists greatly in this latter.

*Ung. Boric* might be made more readily than by sifting boric acid into the melted paraffin by rubbing the acid in a warm mortar, adding the melted paraffin and stirring diligently till cold.

Mr. GEORGE COULL, B.Sc., followed on somewhat similar lines, and at the outset he deprecated the policy of wholesale deletion which previous speakers had advocated, and which seemed to be the tendency of much of the pharmacopœial criticism which emanated from pharmacists. He maintained that it was the prerogative of the medical profession to do this through its representatives, the General Medical Council. After they had stated what drugs and likely preparations were to be made official, the pharmacists' part was to step in and aid them in their difficulties by showing how those drugs might be best exhibited, and fixing standards and tests for those whose purity could be determined by chemical examination. At the same time he thought pharmacists should consider it their right to have a hand in helping to frame the national Pharmacopœia, and not look upon it as an honour for which they ought to feel devoutly thankful. Mr. Coull then proceeded to refer

to some things that Dr. Lauder Brunton had said in his *B. M. J.* article, incidentally pointing out a bad slip of the doctor's in referring to tincture of chloroform and morphine as compound tincture of chloroform. Having referred to some general principles of Pharmacopœia revision, Mr. Coull proceeded to submit the following suggestions:—

*Dilute Acids.*—If made by weight, time and trouble would be saved in waiting till the mixture cooled to 60° F. before being made up to the required volume. Sulphurous acid should be tested for in several acids by the reducing action of hydrogen with formation of sulphuretted hydrogen, and subsequent blackening of lead-acetate paper.

*Acidum Carbolicum* was referred to on the lines of the author's recent paper.

*Acidum Hydrobromicum Dilutum.*—A test for sulphurous acid ought to be given, sulphurous acid or a sulphide being sometimes added to decolorise the acid when it has turned brown. The best acid is that made by the interaction of bromine and phosphorus. The B.P. specific gravity is 1.077, but 1.0715 is nearer the mark.

*Acidum Hydrocyanicum Dilutum.*—The U.S.P. assay process is simpler and better than the B.P. one. A test for hydrochloric acid should be given.

*Acidum Meconicum.*—The formula should be stated.

*Acidum Oleicum* should be called an unsaturated fatty acid.

*Acidum Phosphoricum* should be estimated with standard soda and phenolphthalein.

*Cinchona.*—In assaying the temperature at which the quinine is to be dried should be stated, and its composition indicated—anhydrous, monohydrate, or trihydrate.

*Chloral Hydras.*—Formula should be given showing that the water is chemically combined.

*Decoctum Pareira* is made from the root, and the liquid extract from the solid extract. Why the inconsistency?

*Ergotinum.*—The instructions involve a foolish waste of valuable material.

*Extractum Cimicifuge Liquidum.*—Why is rectified spirit ordered here, and proof spirit in making the tincture?

*Extracta Liquida.*—The author advocated re-percolation.

*Ferri Phosphas.*—The standard for this could easily be raised, and the directions for making should be amended.

*Injectio Apomorphine Hydrochloratis.*—It is impossible to get all the apomorphine hydrochloride into solution.

*Liquor Ferri Dialysatus.*—Potassium ferrocyanide is said not to cause any precipitate, but it has done so in every batch of dialysed iron made by the author.

*Liquor Magnesii Carbonatis.*—With sulphuric acid, cochineal gives a much sharper end-reaction than methyl orange, previously recommended by the author.

*Liquor Plumbi Subacetatis.*—A useful addition to the instructions here would be to order distilled water, recently boiled and cooled, to be used in diluting to the proper strength.

*Liquor Potasse.*—Under this solution, as well as some others, a definite specific gravity and a definite percentage strength are given. It is only when dealing with chemically pure materials that we can get a definite specific gravity to correspond to a definite percentage strength. This is a suitable place for the insertion of that little word "about."

*Liquor Zinci Chloridi.*—When evaporated to the required bulk and cooled, this solution becomes opalescent, and gradually deposits what is probably zinc oxychloride. It requires the addition of hydrochloric acid to keep it clear. The specific gravity is 1.569 to 1.585.

*Opium.*—The next Pharmacopœia must state whether the strength of preparations of morphine is to be calculated on morphine hydrate or on anhydrous morphine.

*Potassi Tartras Acid.*—There is now no difficulty in obtaining this to contain 99 per cent. acid tartrate. The volumetric determination with caustic soda and phenolphthalein ought to be introduced and a test given for sulphates, potassium bisulphate being a possible adulterant.

*Spiritus Ammonia Aromaticus.*—After adding the quantity of barium chloride ordered in the test for carbonate and filtering, the addition of more barium chloride sometimes does not give a further precipitate, but on heating the precipitate is at once formed. Precipitates of barium carbonate are slightly soluble in ammonium chloride. In titration for total alkalinity cochineal is an excellent indicator.



## SOME RECENT CRITICISMS AND SUGGESTIONS.

Mr. MABEN, on carefully perusing what had recently been written, had concluded that the life of an editor who had to arrange such a mass of contradictory material was not to be envied. Something would probably be gained by examining these criticisms, if the critics only take the lesson to heart. The main attack on the galenicals had been made by Dr. Whitla, whose iconoclastic sledge-hammer fell crashing amongst the most sacred of them. If he had his way there would not be much of the present B.P. left; but fortunately the experts were not agreed, and pharmacists might be able to preserve a little of the Pharmacopœia, which might be of permanent use to the Empire when current medical fads were buried in oblivion. Mr. Maben then dealt with various classes of preparations, quoting first the criticism, and then the defence. In this way he instanced Whitla as condemning confections, and Dr. Burney Yeo approving of them; infusions were condemned by Whitla, Leech, and Stockman, and defended by Yeo and Professor Carter. Even were the experts agreed to exclude such preparations as the infusions, would the profession give them up? Before the dicta of specialists were accepted, they must see that they do no violence to the opinions and practice of the average practitioner. From Martindale's analysis of 12,000 prescriptions, infusions were found to be very popular with prescribers. Whitla's opinions on the strength of ointments were canvassed, and his inconsistent criticism regarding the varied strengths and varied doses of certain preparations, it being pointed out that either the strengths or the doses must of necessity vary. With regard to the enemata, Whitla thinks they "afford the best examples of official preparations framed in opposition to the recognised principles of physiology and therapeutics," but Yeo and Lauder Brunton were quoted in an opposite sense. It was sad to think that Sir Richard Quain and other eminent men were so ignorant of the recognised principles of physiology, and, since the leaders are so befogged, they need not wonder at what they say of the ignorance of the rank and file. Lauder Brunton was so convinced of the helplessness of the average prescriber that he wished every possible piece of information inserted, to guide them and prevent their making mistakes in prescribing. The hypodermic injection of morphia was said to be the cause of deaths, owing to its being much too strong, and in this connection Mr. Maben said it was curious to find Mr. Naylor advocating the metric system, and at the same time violating its main principle by making liquors one in nine. There was no more agreement with regard to the proposed additions. Lauder Brunton wants cachets, tabloids, and capsules, and Stockman will have none of them. Whitla wants tabloids, but Yeo objects both to tabloids and capsules. The "Committee of Experts" suggested by Stockman would have to decide whether capsules were to be introduced, and, if so, what medicines were to be administered by them. The suggested introduction of therapeutics was unfavourably criticised, as also the fashionable craze against polypharmacy, and the experts were shown not to be in agreement here. The paper concluded with a reference to Stockman's remark that the pay should go to those who did the work. This might be true, but who were they? Dr. Stockman might, for example, wish to remunerate such a body as the Addendum Committee; but if "payment by results" were the rule, he would find on inquiry that, as he had already stated, one-third of the galenicals were never prescribed and were simply lumber; that of the remainder three-fourths had been lifted almost without a word of alteration, and certainly without a word of acknowledgment, from the "B.P.C. Formulary" and the "Extra Pharmacopœia"; and that the effective result of the committee's labours consisted of an abortive substitute for eonymin, and two ointments, one of which was a doubtful success. He thought that so long as Dr. Attfield occupied the position and bore the responsibility of editor of such an important national publication, he ought to be paid accordingly.

## HOW LONG IT LASTED.

A correspondent of a statistical turn of mind informs us that though the following times were not taken with a stop-

watch they may be considered accurate records in minutes of the time occupied by each of the Pharmacopœia commentators:—Boa, 7; Lyon, 20; Fraser, 4; Tillie, 10; Swan, 7; Glass, 12; Sillars, 24; Day, 6; Stephenson, 5; Coull, 17; Maben, 1.

Mr. Maben's paper was really taken as read, the Assistant Secretary briefly explaining the lines which it took. Drs. Tillie and Sillars, assistants to Professor T. R. Fraser, whose names were not on the billet, were sandwiched in between the papers, and the meeting did not appear to be highly edified by what they said. Mr. Coull, who read the last paper, fairly galloped over it. But in vain. Eleven o'clock struck before he was done, and Forbes-Mackenzie had done his worst.

The meeting was a record one so far as attendance was concerned. The new hall was almost full. The old hall could not have held half of those present. How is it, asks our correspondent, that the London meetings of the Society cannot be made more popular than they are? Perhaps some Edinburgh leaven might make things a little brisker at Bloomsbury.

## Chemical Society.

THE anniversary meeting, held at Burlington House on Wednesday afternoon, was one of the quietest of recent years, yet when it was over it was the unanimous opinion that it was one of the most eventful in the history of the Society. It was about a quarter-past three when Dr. Armstrong, the President, came in, Professor Thomson, the Senior Secretary, soon after him; then Professor Dunstan, the Junior Secretary, brought in Lord Rayleigh, who modestly took a seat on the third bench. The PRESIDENT at once commenced his presidential address, which at the outset threatened to be quite statistical; but soon he came to the

## FARADAY MEDAL,

commenting upon the difficulty of getting a distinguished foreigner upon whom it could be bestowed, for it has been the custom to bestow it upon foreigners only, and they are expected to deliver a Faraday lecture. This year it was offered to Prof. E. Fischer, who could not accept it, and the Council made a departure by determining to bestow it upon one who had after a painstaking research led up to the discovery of a hitherto unknown constituent of the atmosphere. Rapidly, yet clearly and appreciatively, Dr. ARMSTRONG sketched the significance of that discovery, and called upon Lord Rayleigh to receive the medal. The philosopher-peer, who is as modest-looking a man as there was in the room, though with face and head that distinguished him, ascended the platform amidst cheers.

LORD RAYLEIGH, returning thanks, said he could not do so without saying that there ought be another standing at his side—Professor Ramsay. (Applause.) From the beginning of his work on the atomicity of the elements to the isolation of argon was a long step, and it was made by them simultaneously and independently; but since then they had worked together. He wished to quiet the murmurings which had been heard as to antagonism of physics and chemistry in this matter. There was no such antagonism, and though he had lately devoted his time to physics, he assured the meeting that he had burnt his fingers with phosphorus as early and as effectively as anyone. (Laughter.)

The PRESIDENT here remarked that Professor Ramsay had some important observations to make.

## ANOTHER NEW ELEMENT.

Professor RAMSAY, on rising, was received with hearty acclamation. He said he had obtained some clue to the existence of compounds of argon. Hildebrand mentions that when cleveite is treated with sulphuric acid and the gases isolated examined, there is found to be a residue of nitrogen. This struck him as a curious circumstance, so he repeated the experiment, and taking the supposed nitrogen sparked it along with oxygen, when it turned out to be argon and the hypothetical element helium. Mr. Crookes would explain the spectroscopic characters which determined the result. Hitherto helium had only been observed



in the solar corona, and his supposition was that it is an extremely light element, far lighter than hydrogen, which would account for its passing detection, and probably its existence in the solar corona. Whether it could be separated from argon remained to be seen.

This statement was listened to with intense interest, and the applause which followed delayed for a few seconds the supplement to it.

Mr. WILLIAM CROOKES said that when he first observed the broad yellow band in the spectrum of the gas isolated from cleveite, he at once said, "Oh, sodium!" But he found that it did not give the characteristic doubling of that element. Ultimately he found three lines,  $D_1 = 589.52$ ,  $D_2 = 588.91$ , and a new one,  $D_3 = 587.45$ . The last corresponded to the line known to astronomers as helium, which was given as  $= 587.49$  and  $587.46$  by two observers. He had compared the spectrum lines of helium with those of nitrogen, and found similarities and coincidences between them in the blue and ultra-violet, but there were important points of difference, and these he hoped to map when he had more time to examine the gas. It was only within the last day or two that he had studied the matter.

#### A YEAR'S WORK.

The PRESIDENT, having congratulated Professor Ramsay, continued his address, referring to the retirement of Mr. Josiah Hall, who got a pension and present of plate, and the appointment of Mr. Robert Steel, late science-master at Bedford School, as Assistant-Secretary and Librarian. The membership of the Society is less to-day than last year—1,954 as compared with 1,962, 126 having been removed. Of the latter 26 Fellows were scratched off because they had not paid their fees for four years, and 56 were three years in arrear. Twenty-seven Fellows had withdrawn, and the loss by death was 17. The President intimated several memorial lectures, and said he had nearly completed the Hofmann lecture pamphlet and the history of the Society for the Jubilee monograph. He strongly deprecated the unjustifiable blackballing recently exhibited, and concluded his address by commenting upon the journal of the Society, the subscription to which will in future be two guineas a year. The specific portion of his address on the Association Hypothesis was laid upon the table.

Sir FREDERICK ABEL, in moving thanks to the President, referred to his official work during the past twenty years.

In replying, Dr. ARMSTRONG promised to continue his practical interest in the Society's work.

#### FINANCE.

Dr. THOMAS THORPE, the treasurer, then submitted his statement. This showed an income of 4049*l.* from subscriptions, 470*l.* 15*s.* 6*d.* from publications, 364*l.* 17*s.* 6*d.* from dividends, and 39*l.* 3*s.* from other sources. The expenditure amounted to 4,135*l.* 6*s.* 11*d.*, of which 2,757*l.* 5*s.* 3*d.* was for the journal, the rest being for house and library expenses, stationery, &c. Dr. Thorpe objected to two items—87*l.* 11*s.* 11*d.* for miscellaneous printing, and 43*l.* 12*s.* 9*d.* for stationery—which he said were too high. Mr. BEVAN, one of the auditors, speaking afterwards, agreed.

The following grants were made from the research fund:—A. E. Tutton, 47*l.*; Dr. James Walker, 10*l.*; Herbert Jackson, 25*l.*; W. A. Bone, 10*l.*; Dr. George Tate, 20*l.*; W. R. Dunstan, 20*l.*; J. J. Sudborough, 10*l.*; H. Crompton, 20*l.*; F. D. Chataway, 10*l.*; W. H. Perkin, jun., 25*l.*

Votes of thanks then followed, the only unusual incident being a statement of the Treasurer, elicited by Mr. Warrington, that 46*l.* 16*s.* had been paid for rent of type in connection with the Jubilee monograph and Hofmann memorial.

Mr. WARRINGTON strongly condemned this. It was not encouraging for people to communicate matter when there was so long delay in publishing it, as well as financial loss to the Society.

#### BY-LAW ALTERATIONS.

The following additions to the by-laws were then agreed to:—

1.—In By-Law I., at line 7, after the words "personally known," substitute the following:—"and the name of each candidate shall be read at three ordinary Scientific Meetings, and such certificates shall be published in full in the Society's Proceedings and suspended in the Society's Rooms or place of meeting, until the candidate has been duly balloted for."

2.—In By-Law IV., lines 2-4, substitute the words:—"shall owe two annual subscriptions" for the words "have left his subscriptions unpaid for two years reckoning from the 1st of January preceeding."

#### MORE THANKS.

Professor TILDEN said that this was his first appearance at the annual meeting, and he supposed that his friends were giving him a treat in asking him to move a vote of thanks to the officers. He did this, adding that the meeting was one of the most memorable—indeed, that day was one of the most memorable in the whole history of chemistry.

The vote having been seconded, and passed,

Dr. THORPE replied, humorously referring to the changes which had occurred during the year. They had put the porter in uniform, in consequence of their having an æsthetic junior secretary (Mr. Dunstan). That was done at a cost of 6*l.* 10*s.* a year, and by capitalising the sum they might arrive at some idea of what an expensive commodity an æsthetic junior secretary was. But against that he set a new receipt—5*l.* 15*s.* for advertisements. That might grow. Indeed, he had heard it said that there was a large section of the Society absolutely unacquainted with soap, and he thought if that blot were removed and they could bring some pills from Bloomsbury they would have a nice set-off to the porter's uniform.

The only remaining business was the election of officers, which resulted according to the official list, viz.:—

President: Harcourt, A. Vernon, M.A., LL.D., D.C.L. F.R.S.

Vice-Presidents who have filled the office of President: Abel, Sir F. A., K.C.B., D.C.L., F.R.S.; Armstrong, H. E., Ph.D., LL.D., F.R.S.; Brown, Dr. A. Crum, F.R.S.; Crookes, W., F.R.S.; Frankland, E., D.C.L., F.R.S.; Gilbert, Sir J. H., Ph.D., F.R.S.; Gladstone, J. H., Ph.D., F.R.S.; Müller, H., Ph.D., F.R.S.; Odling, W., M.B., F.R.S.; Perkin, W. H., LL.D., Ph.D., F.R.S.; Playfair, Lord, Ph.D., K.C.B., F.R.S.; Roscoe, Sir H. E., LL.D., F.R.S.; Russell, W. J., Ph.D., F.R.S.; Williamson, A. W., LL.D., F.R.S.

Vice-Presidents: Atkinson, E., Ph.D.; Brown, Horace T., F.R.S.; Japp, Francis Robert, M.A., Ph.D., LL.D., F.R.S.; Mond, Ludwig, F.R.S.; O'Sullivan, C., F.R.S.; Roberts-Austen, W. Chandler, C.B., F.R.S.

Secretaries: Thomson, J. Millar, Dunstan, Wyndham, M.A., F.R.S.

Foreign Secretary: Meldola, Raphael, F.R.S.

Treasurer: Thorpe, T. E., B.Sc., F.R.S.

Ordinary members of Council: Bedson, P. Phillips, D.Sc.; Brough, Bennett Hooper; Dixon, Harold, F.R.S.; Dyer, Bernard, D.Sc.; Friswell, R. J.; Hehner, Otto; Kipping, F. Stanley, D.Sc.; McLeod, Herbert, F.R.S.; Shennstone, W. A.; Stevenson, Thomas, M.D.; Wynne, W. P., D.Sc.; Young, Sydney, D.Sc., F.R.S.

#### ANNUAL DINNER.

The Fellows of the Society dined together at the Hotel Métropole the same evening, Dr. Armstrong in the chair. Amongst those present were Mr. A. J. Balfour, of Whittingham, M.P. Mr. James Bryce, President of the Board of Trade, and Lord Rayleigh. The principal speech of the evening was made by Mr. A. J. Balfour in proposing "The Chemical Society, and the health of the President." Mr. Balfour, in the course of his speech, said that so far as he was acquainted with scientific history, Englishmen need not fear that they have been behind the rest of the world in evolving those root ideas which are the sources of great discoveries, which are themselves great discoveries, and which are, too, the sources and roots of other great discoveries. It may be, however, that though, as a nation, we have been as productive as other nations in the men of genius who have made these fundamental discoveries, we have not, as a nation, sufficiently realised how great a bearing theory in these modern days must necessarily have upon practice if we are to keep pace with the rest of the world. We have produced great theorists—none greater. We have produced men of great practical genius—none greater. He was not sure, however, that at this moment we are not behind one at least of the great nations of the Continent in the art of combining theory and practice—in the art of so welding together in a great organic and self-supporting whole the man of genius, who at one end of the scale discovers a new law of nature, and the man of practice, on the other hand, whose business it is to turn these discoveries to account. (Ap-



plause.) Technical education, he said, properly understood suffers greatly under technical education improperly understood, and there is so much nonsense talked upon this subject—(laughter)—there is so much money uselessly spent, there are so many things taught to persons who do not want to learn them, and which, if they did want to learn them, they could by no possibility turn to practical account, that it is no matter of astonishment that some persons are disposed to say that "technical education is only the last bit of political humbug, the last new scheme for turning out a brand-new society; it is worthless in itself, and not only is it worthless, but it is exceedingly expensive." If we include, as we ought to, within the term technical education the really scientific instruction which would turn scientific discoveries to practical account, then there is nothing of which England has at this moment any greater need. He did not deny that manufacturers and commerce have received an immense amount of gain from theoretical investigations, and science has been the means of great gain through industrial development. Yet he thought it a poor end, a poor object, for a man of science to look forward to merely making money for himself and other people by his researches. He was glad to know that the Chemical Society, while it kept in view useful objects, still put first of all the pursuit of truth as its object and as the cause to which every man of science pays his devotion. Truth, not profit, must necessarily be the motto of every body of scientific men who desire to be remembered by posterity for their discoveries. (Applause.) These things can be done only from a disinterested motive, and it was because of that that he, as an outsider, in the name of the public for which he ventured to speak, wished the Society all success and all prosperity.

Dr. ARMSTRONG responded in a brief and pointed speech, and other toasts followed, Lord Rayleigh speaking for "Learned Societies."

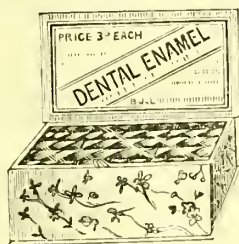
## Notes of Novelties.

### HYDROBROMATE SYRUPS.

MESSRS. FLETCHER, FLETCHER & Co. have introduced two new hydrobromate syrups, in which the basis is liquor cinchon. hydrobrom. (Fletcher). They are named "syrup cinchonæ hydrobrom." and "syrup. cinchonæ hydrobrom. et ferri." These are elegant pharmaceutical preparations, and should be well suited for those who are precluded from using the strong alkaloidal syrups.

### DENTAL-ENAMEL IN NICKEL CASES.

MESSRS. BOURNE, JOHNSON & LATIMER, of Farnival Street, E.C., have devised a useful innovation by putting up sticks of dental-enamel in nickel cases, like silver pencil

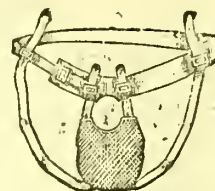


cases. They put up two dozen nickel cases in a tiny glass-topped box, and sell the lot for 4s, leaving the chemist to settle with his conscience about the retail price.

### NEW SUSPENSORIES.

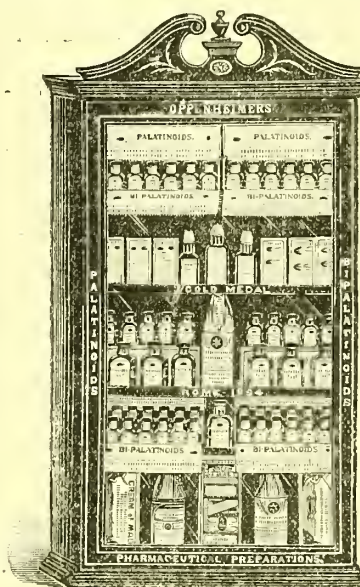
THE DOMEN BELTS COMPANY, whose London office is at 61 Moor Lane, E.C., have introduced to the trade two series of suspensory bandages which decidedly merit attention. The "Multiple" suspensory consists of a strong, well-

made belt with elastic insertions, to which is attached a net bag made of silk or cotton, with rubber strings to go under the thighs and to button-on-the back of the belt. The important point about this bandage is that half-a-dozen bags are supplied with it, so that when one becomes soiled or damp it can be thrown away, the actual cost of the bag in relation to the suspensory as a whole being comparatively small. The Domen "Stowaway" suspensory is on practically the same principle as the above, but it has a second flap outside, so that the whole of the genital organs are covered when this bandage is put on. The shape, as far as we can judge, is well calculated to give excellent support, while the usefulness of this second bandage for athletes, bicyclists, &c., will be apparent to all.



### A SHOW CABINET.

MESSRS. OPPENHEIMER, SON & Co. (LIMITED) have published a new price-list of their pharmaceutical preparations. This list includes all the recent novelties in palatinoids, apparatus, &c., which the firm have introduced. We take the opportunity of illustrating the handsome cabinet which



Messrs. Oppenheimer are willing to lend to any chemist who will buy a sufficient stock of their goods. The cabinet is 3 feet 3½ inches high by 1 foot 8½ inches broad, made of rosewood inlaid with ivory wood, and fitted with a bevelled plate-glass front.

MR. GEORGE R. SIMS says in the *Referee*:—"Some of my influenza correspondents tell me that they have not been able to obtain periodate crystals, and one goes so far as to accuse me of having invented the remedy myself, and complains that I have trifled with a very serious subject in a spirit of 'spoof' unworthy of a man and a brother. . . . Several chemists write me that I have been passing a proprietary article. At a time of influenza everything bearing upon its cause or cure is of the greatest possible interest, whether it is a proprietary article or not." True, oh! Sims. The crystals are offered by the Periodates Company.



## The Winter Session.

### CHEMICAL SOCIETY.

THERE were several interesting features connected with the meeting of this Society which was held at Burlington House on March 21. Some eleven or twelve papers were down on the agenda-paper, and of these seven were communicated. Professor BRAUNER, of Prague, attended in person, and was jointly or individually responsible for four of the papers which were read at the meeting; and the three remaining authors had each some new facts to detail. It was not Professor Brauner's first appearance at one of these meetings, for when the PRESIDENT, in calling upon him to give his papers, requested that he would first sign the roll of Fellows, the professor replied that he had already done that six years ago. The first paper was on

#### THE DETERMINATION OF SUGARS.

by one of Brauner's pupils. In the estimation of glucose by Pavy's modification of Fehling's test, the solution soon becomes blue again from atmospheric oxidation; attempts were made to counteract this oxidising influence by conducting the estimations in an inert atmosphere such as nitrogen, but without much success. The experimenter then covered the surface of the fluid in the estimation flask with a layer of "vaseline oil" with satisfactory results; and he publishes tables containing factors obtained by estimating the various sugars by this method. The two succeeding papers were the joint production of Professor Brauner and another pupil, and referred to the action of sulphuretted hydrogen on

#### ANTIMONIC, ARSENIC, AND TELLURIC ACIDS.

The complete conversion of antimonious into antimonie compounds Brauner affirms to be most difficult. A tetra-valent modification is produced, and a stable potassium salt may be prepared  $3KCl, 2SbCl_4$ , the sulphide corresponding to which  $Sb_2S_5$  is a crystalline pink compound totally different from both antimonious and antimonie sulphides.

The conditions under which the different sulphides are produced were discussed, and the more rapid reduction in the presence of chromium compound was noted. The points of resemblance and of dissimilarity between the sulphuretted derivatives of arsenic and antimony were pointed out, and it was stated that  $H_3AsO_3$  is stable and capable of conversion, at least in part, to  $H_3AsO_4$ , of which the potassium salt  $K_3AsO_4$  is known, whilst the corresponding antimony compounds are unstable, the concluding generalisation being that the more positive the character of the metal in the periodic system, the less stable are the compounds under notice.

The fourth paper was on a subject to which Professor Brauner has already devoted twelve years of studious research,

#### THE ATOMIC WEIGHT OF TELLURIUM.

In some preliminary observations, the Professor modestly disclaimed any prescriptive right to a monopoly of research on tellurium and its compounds, and frankly avowed his readiness to accept with an unbiassed mind any demonstrable proof of the inaccuracy of his own conclusions. The sentiment and the candour underlying it elicited very hearty applause, as though the Fellows would say, "We commend in another the virtue we do not ourselves possess." When Brauner began his investigations, in 1883, the atomic weight of tellurium was stated to be 123; as the result of his most recent analyses of  $TeBr_4$ , he finds the atomic weight to be 127.71 when reduced to a vacuum determination. It was to the generosity of Dr. Ludwig Mond that Brauner was indebted for the relatively large supplies of the ore which his investigations necessitated. Some of the difficulties encountered were touched upon, such as the decomposition of telluric acid  $H_6TeO_6$ , which is difficult to prepare, and when decomposed splits up in four stages. The position of the element in the periodic system was discussed, the Professor's eye vainly wandering round the walls of the lecture-theatre in search of Mendeléeff's Table, which is not a permanent feature of the place. The ordinary position, as

the highest member of the O.S.Se and Te group, will, in view of the discovery of argon, probably need revision. If it be assumed that two elements are present in one of these groupings, it follows that there must be four—*e.g.* C. and Si, Ge and Sn are coupled in Group IV.; N. and P, As and Sb in Group V. As argon is assumed to be composed of two elements, the new argon group, which is to include tellurium, will stand—A'20, A'38 (the argon couple), A'82, A'130 (the tellurium couple). This, of course, opens up the question of the meta-elements, and Brauner has abundant evidence to prove that Te is not a single substance, whilst Boisbaudran has confirmed the general conclusions of Brauner from a totally different aspect; it is thus seen how closely allied are the problems of the composition of argon and of tellurium.

Professor RAMSAY (who had read a paper by himself and Mr. E. C. C. Baly at the Royal Society the same afternoon, in which it was shown that oxygen and nitrogen may each probably be dissociated into two new gases), said, "If oxygen is to be split up into two, where are we? Speculation is fruitless; all we can do is to experiment and wait with patience for further developments." Mr. CROOKES said Mendeléeff's system might be compared to pigeonholes, but the divisions were not large enough—we wanted houses in which to locate the sub-divided elements. In connection with Boisbaudran's predictions of atomic weights, it was remarkable that his system should be apparently very accurate in forecasting the probable weights of undiscovered substances; so far as he knew, the system upon which he based his calculations had never been made public. Professor BRAUNER having briefly replied, Dr. MORRIS was requested to communicate his paper on

#### THE HYDRATION OF MALTOSE BY YEAST.

Fischer, of Berlin, not long ago published some experiments which upset all previously recorded observations on this subject. Dr. Morris has repeated Fischer's work and confirms it. Air-dried yeast is capable of hydrolising maltose into dextrose. It is not a function of the invertase elaborately described by O'Sullivan and Tompson a few years ago; and at present the precise hydrolising agent is undetermined. Dried yeast liquefies starch-paste, and hydrolises all the high starch-transformation products of diastatic action.

The paper by Dr. G. T. MOODY on "Studies in Isomeric Change—The Ethyl-benzenesulphonic Acids" proved that even the most reputable chemical manufacturers may at times digress from the

#### PATH OF PURITY.

Kahlbaum, of Berlin, is a name uttered with bated breath in research-laboratories, but his ethyl-benzene furnished the author with sulphonation-products which entirely coincided with the text-book statements, though a perfectly pure substance yields but one ethyl-benzene sulphonate, and not the two isomeric sulphonates usually referred to in this reaction. The point opened out some theoretical considerations, which were confirmed by a second paper, to the discussion of which Drs. ARMSTRONG and W. P. WYNNE contributed some useful and appreciative criticisms.

#### CHEMISTS' ASSISTANTS' ASSOCIATION.

At the meeting on Thursday, March 21, the President (Mr. R. H. Jones) in the chair, Mr. ERNEST GOULDING read a paper on

#### SANITATION.

In the course of this, the author stated that the science of sanitation deals with the preservation of the public health and the prevention of disease, and in its broadest sense has been closely associated with the rise and fall of nations. As a nation becomes more civilised, personal cleanliness is more looked after, the question of suitable clothing is more taken into consideration, and the subjects of drainage and water-supply receive a larger share of attention. The principles involved in the science have reference to dwellings—their site, ventilation, and space allowed to each individual; to food and drink in their connection with epidemics, and the condemnation of any if improperly cooked or decaying; to clothing; and to cleanliness.

Looking at the historical phases of the subject, the Jews claim first attention. Their freedom from the recurring



epidemics of the Middle Ages and their longevity can only be attributed to their adherence to the rules laid down in the Book of Leviticus. The Greeks possessed a code of sanitary laws propounded by Lycurgus, very harsh and severe, but in force for seven hundred years. Although the Romans contributed little to the science, they left some wonderful examples of sanitary engineering. Frontinus tells of the great aqueducts bringing water to Rome. The works have seldom been equalled at the present day, and some of them are in use at the present time.

In our own country, in the early periods, plagues and famines were mixed up with incredible stories of earthquakes, of blood and of "armies fighting in the air," and were looked upon as manifestations of Divine anger. The food of the people was coarse, their dwellings filthy, streets were unpaved and covered with rushes, concealing all sorts of abominations; towns were walled in and favourable to overcrowding and stagnant air—conditions altogether inimical to health. In the twelfth and thirteenth centuries there were no less than thirty-five widespread epidemics, including the terrible "Black Plague"; in the fourteenth and fifteenth centuries there were seven. The Elizabethan era showed a great development of manufactures, and growth of commerce and parallel social changes, such as better-built houses and the introduction of carpets to replace rushes for the floors. The seventeenth century was marked by the visitation of the Great Plague; but the eighteenth marked the dawn of a better day. The progress in commerce and the improvements in agriculture had added steadily to life comforts—food had become less coarse, and home and personal cleanliness were far more recognised, soap and soda were introduced, and clothes of better texture could be obtained. Since the advent of the present century there has been the same continuous accumulation of wealth and a very much increasing population. With the latter necessarily overcrowding has been occasioned in the towns and houses. In the earlier part of the century the streets of towns were dirty and undrained, the sewers leaky, and house-drains equally defective. Scavenging was neglected, filth accumulated, and cesspits multiplied, wells becoming polluted and mischief done, not even repaired to this day. By the efforts of men like Drs. Farr and Guy attention was aroused, and Parliament at length appointed the Health of Towns Commission. The work of this body showed almost universal bad drainage and water-pollution, and overcrowded and unhealthy houses. However, the relations of the causes and effects as applied to disease were becoming more known, and cries began to be raised for legislative interference. Vested interests were so strong that not until the threatened visitation of the cholera was Parliament alarmed into passing the Public Health Act of 1848. This Act laid the foundation of our sanitary legislations. Under it a General Board of Health was constituted, and inspectors were appointed to investigate the conditions of towns which showed a high death-rate. Since that Act, there have been the Adulteration of Food and Drugs Act of 1860, the Sanitary Act of 1866, the Public Health Acts of 1872 and 1875, and many other beneficial enactments. The science has also made great progress, and its application has been the source of inestimable benefit to our armies and navies, and in the factory and workshop, and the Legislature is at last fully alive to the importance of the subject.

A discussion followed the reading of the paper, in which the President, Messrs. Moore, Roe, Roberts, A. T. Hill, and W. A. Jones joined.

#### GLASGOW AND WEST OF SCOTLAND PHARMACEUTICAL ASSOCIATION.

The last ordinary meeting of the present session took place on March 21, Mr. W. L. Currie presiding.

##### PHARMACY NOTES

was the subject of a paper read by Mr. ROBERT BRODIE. The author at the outset gave some account of his method of preparing tinctures by percolation. At first he followed the usual directions as to putting coarsely-pounded glass at the bottom of the percolator, then a layer of clean sand, next the drug to be operated upon and percolated with spirit, lastly displacing the spirit with water. But he did not find water displacement so satisfactory as pressure. The author

next criticised the recommendation embodied in Mr. Dunlop's recent paper contributed to the Association that the directions given in the B.P. for galenical preparations should be followed in order that these preparations might possess the same physical characteristics and strength from whomsoever obtained. While that, he said, might be very desirable, and perhaps tend to do away with the remark occasionally made by customers that this was not like what was got elsewhere, he did not think such a result, however desirable, unless these directions were more full or explicit. The directions for preparing most of the tinctures might have been stereotyped, although applied to different quantities and qualities. He contrasted the directions for *tr. belladonnæ* and *tr. ergotæ* as typical examples of the necessity for revision in this department; then proceeded to speak about concentrated infusions, objections to the use of which, he said, were founded either upon sentiment, or upon an erroneous idea as to their manufacture, or upon the presence of spirit. With each of these classes of objections Mr. Brodie dealt in turn; then, turning to the official infusions, he said that the encouragement given to their use by shortening the time of preparation had only been successful in high-class trade, because there the conveniences for delivery are numerous, while in poor localities, where the chemist has no messenger, and a friendly neighbour fetches the medicine, waiting for a fresh infusion is intolerable, and concentrated preparations become necessary. Mr. Brodie considered it highly desirable that there should be some official recognition of such preparations, and without putting forward any definite plan for their preparation, discussed generally and somewhat facetiously the principles involved, particularly emphasising the difficulty of obtaining fresh lemons all the year round—this difficulty being, perhaps, more keenly felt in Scotland than elsewhere. Mr. Brodie deplored the deletion of the old *mist. gentian co.*, which was a most useful preparation, more elegant than the infusion, and better as a tonic, while it kept well, which cannot be said of the infusion. At the best, however, infusions are mainly vehicles, and that being so, he said, the sooner the primitive, weak, watery infusions were done away with, and the more potent and useful concentrated infusions were officially recognised, the better.

#### LIVERPOOL PHARMACEUTICAL STUDENTS' SOCIETY.

A MEETING was held on Thursday, March 21, the President (Mr. R. H. Mitchell) in the chair. Mr. PIERSON mentioned that in a recent prescription he had to dispense cocaine, hydroch. and borax. Upon being mixed a precipitate was formed, but on the addition of a small quantity of boric acid the precipitate was taken up, and a complete solution was the result.

Mr. T. S. WOKES then read the following

##### PHARMACY NOTES.

In making *mist. guaiaci* by using *tragacanth* instead of *gum acacia*, as recommended by Squire, a better and more satisfactory preparation results, using  $\frac{1}{4}$  quantity. Lump sugar may also be used in place of the powder, as it tends to separate the *gnaiaicum* better.

*Dobell's Solution.*—There is a demand for this in Liverpool at present, and Mr. Wokes gave the formula as follows:—

|                  | N. F. |    |       |              |
|------------------|-------|----|-------|--------------|
| Ac. carbol. pur. | ..    | .. | m45   | .. gr. xxiv. |
| Sodii bibor.     | ..    | .. | 5i.   | .. 5ij.      |
| Sodii bicarb.    | ..    | .. | 5i.   | .. 5ij.      |
| Glycerini        | ..    | .. | 5i.   | .. 5ss.      |
| Aquæ ad          | ..    | .. | 5xvi. | .. ad 5xvj.  |

[We have added the quantities recognised by the "National Formulary." See *C. J. D.*, xxxix., 97.—ED.]

*Glycerine and Cucumber.*—In making this, instead of rubbing up the pomade and soap with cold water, melt the pomade on a water-bath, and dissolve the soap in the water separately. Then put together, and shake the solution frequently until nearly cold, finally adding glycerine and perfume. By this method it is easily made, and a satisfactory preparation results. Of course the exact amount of soap necessary to get the consistency desired should be determined. A member said he had tried Mr. Wokes's suggestion, and found it to answer very well.



In making *Suppositories*, if the cocoa-butter is heated beyond a certain degree, some change seems to take place in its composition, as in such cases it will often remain semi-fluid a considerable time after getting cool. Several members said they had noticed the same fact, but no remedy could be suggested except that care should be taken in the melting of the cocoa-butter.

A mixture containing sodii sulphocarb., mag. carb., tr. card. co., and water, developed a brown colour on standing a little while, instead of remaining pink. It was suggested that the sodii sulphocarb. was contaminated with traces of iron; hence the change in colour.

A mixture containing pepsin-powder and bismuth, with syrup, tinctures, and water, gave some trouble. The bismuth and pepsin were lightly rubbed in a mortar with water and added to remainder of the ingredients. Shaking before filling up gave a froth, which could not be got rid of by ordinary means.

Should we dilute oleat. hydrarg. with oleic acid or with vaseline?—A discussion showed great divergence of opinion on this point, but the opinion of the meeting was that it is only right to reduce with oleic acid, and not vaseline, although the latter makes a better preparation for use.

Tincture of Peruvian bark: should we supply comp. or simp. tr.?—The meeting was of opinion that the compound tincture should be supplied, although it was admitted that some allowance must be made for the locality in which it was sold.

Aq. menth.—pip. or virid.?—A great difference of opinion existed on this point.

Should we always put "Shake the bottle" on mixtures containing hydrocyanic acid?—In view of the fact that the active ingredient would exist largely in the partly-emptied bottle as a gas, it was, after some discussion, agreed that the bottles should be labelled "Shake the bottle." [This is scarcely necessary in alkaline mixtures.—Ed.]

When minute quantities of powerful ingredients are ordered in a pill, how large should we make them?—The unanimous opinion was 1 gr.

When ordinary blisters are ordered, should we paint them over with anything to increase their efficacy?—In reply to this, some said liq. epi-pastic; some, acid. acetic.; others, olive oil; and a few—nothing.

When the prescriber makes an obvious error, or anything which might be misconstrued, in a prescription, should not the first dispenser mark it, so that subsequent ones know what course to pursue?—Yes, said the meeting.

Mr. Wokes also submitted a few uncommon prescriptions, and was thanked for his paper.

## Gazette.

### PARTNERSHIPS DISSOLVED.

Beecham, T., and Beecham, J., under the style of Thomas Beecham, manufacturers and vendors of proprietary articles known as Beecham's pills, &c., St. Helens and elsewhere.

Cartwright, R., and Fordham, G. C., under the style of Cartwright & Fordham, brewers and mineral-water manufacturers, Firsby.

Cox, A., and Montague, J. H., under the style of C. Wright & Co., surgical-instrument makers, New Bond Street, W.

Gower, A. J., and Emerson, J. T., under the style of Gower & Emerson, chemists and druggists, Halstead.

Tinker, S., and Littlewood, H., under the style of Tinker & Littlewood, aerated-water manufacturers, Huddersfield.

### THE BANKRUPTCY ACTS, 1883 AND 1890.

#### RECEIVING ORDER.

Allen, J. Fenwick, Widnes, in the employ of the United Alkali Company (Limited).

#### ADJUDICATIONS.

Bloxham, Stuart Charles, Goudhurst, surgeon.

Dixon, Richard Hall, Lyl Road, Old Ford, E., late Major Road, Stratford New Town, E., pharmacist.

Dorward, David, Darlington, late Willington, Durham, aerated-water manufacturer.

## Legal Reports.

### GROCERS AND FELLOWS'S SYRUP.

At the Carnarvon County Court, on Wednesday, March 20, Judge Sir Horatio Lloyd heard an action in which the Pharmaceutical Society of Great Britain sought to recover a penalty from Messrs. Evans & Lake, grocers, &c., Carnarvon, for selling a bottle of Fellows's syrup. Mr. Roland Vaughan Williams, barrister, on behalf of the Society stated the law of the matter, and that on January 2 Mr. T. J. Hughes, who is a chemist at Bethesda, went to defendants' shop, and bought a bottle of Fellows's syrup of hypophosphites.

The Judge: A medicine that cures everything, I suppose? (Laughter.)

This medicine, Mr. Williams went on to say, contained amongst its ingredients a quantity of strychnine. Mr. Hughes took the bottle home, and communicated the fact of the sale to the Registrar of the Society, and in due course the Registrar's clerk came down and took possession of the bottle, which was subsequently submitted for analysis, and found, as already stated, to contain a small proportion of poison.

Mr. J. T. Roberts, on behalf of the defendants, appealed to the Court to deal strictly with the Society. The particulars simply alleged a sale of medicine by the defendants without alleging that they were not chemists and druggists, which was the essence of an offence under the Act.

The Judge: If you can prove that you are a druggist, then there is an end to it.

Mr. Roberts then pointed out that the words of the section were "sells or keeps open," and he wished to know which of these two the Society proposed to proceed under.

The Judge said that he would settle that point after hearing the facts of the case.

Mr. T. J. Hughes then proved the purchase on the date mentioned. As far as he could remember, the medicine was supplied to him by a young man named Gardner. He also bought a pennyworth of sweets at the same time.

The Judge: To take after the medicine? (Laughter.) Cross-examined by Mr. Roberts, the witness stated that he also sold Fellows's syrup. His price was 3s. 6d. a bottle, being 6d. below the price at which he was supposed to sell, but the defendants only charged 3s. 1d.

The defendants have opened a branch recently at Bangor, have they not? Witness: Yes.

Has that affected your sale at Bethesda? I am not aware.

One of the clerks of the Pharmaceutical Society and the analyst having been called,

Mr. Roberts urged that the Society ought to be made to choose between the two offences—viz. selling or keeping open a shop.

The Judge: If a person sells he keeps an open shop for selling in a case of this kind.

Mr. Roberts: The sale of this medicine has been forbidden by the defendants long before this alleged sale took place. Moreover, the article was not exposed for sale.

The Judge: If the shop is open, and the public go there and ask for a particular thing, it does not matter from what part of the shop they get it.

Mr. Roberts referred to a High Court action, in which the present Society were plaintiffs, where the unqualified assistant of a chemist was held liable for the sale of vermin-killer which contained strychnine. He, therefore, maintained that under section 15 of the Act the person who actually sold, and he alone, was liable, and, on the strength of the case quoted, the seller in the present case ought to have been summoned, and not Messrs. Evans & Lake.

Mr. Vaughan Williams: All that this point comes to is that the assistant as well as the master is liable.

Mr. Roberts proceeded to explain that immediately the defendants discovered Fellows's syrup scheduled among the poisons in the Pharmaceutical Society's list they withdrew it from sale.

Two of the defendants' assistants were then called, and both denied having ever sold the bottle in question to Mr. Hughes, whom they did not recognise as having called at the shop at all. Instructions had long ago been given the assistants not to stock any more of this medicine.

Mr. Lake said he withdrew Fellows's syrup from sale.



immediately he found it on the list of poisons, but had the Society supplied him with the name of the purchaser when he applied for it he would have paid the penalty and so saved these proceedings. Strict instructions were given the assistants some six months ago to discontinue the sale of this medicine.

Replying to Mr. Vaughan Williams, the witness said that at the time the medicine was withdrawn there were only a very few bottles in stock, and these were kept under lock and key in his private office, to which none of the assistants had access.

His Honour reserved judgment.

### THE GREENOCK PERSONATION CASE.

#### DECISION BY THE SHERIFF-PRINCIPAL.

IN the Greenock Sheriff Court, on March 21, judgment was given by Sheriff-Principal Cheyne in the appeal in the case of John Connor, druggist's assistant, Greenock, who sued Dr. William Cairns for 500*l.*, alleging that the defender had slandered him by saying pursuer had prejudiced the minds of defender's patients against him and in favour of another doctor, and that the defender had used words regarding him to the import that he had not passed his preliminary examination, but had got another person to impersonate him.

The action was heard by Sheriff Henderson Begg, who gave decree of absolvitor (practically justifying the allegations of the defender). Against this decision pursuer appealed, and the Sheriff-Principal has now dismissed the appeal, with costs.

In a note appended to his judgment Sheriff Cheyne says:—"I had the benefit of a very able and exhaustive review of the evidence from Mr. Murray, on behalf of the pursuer, and I have since the hearing read and re-read the evidence most carefully, and, I am free to confess, with a strong desire to decide in favour of the pursuer, to whom an adverse judgment will obviously be attended with serious consequences; and I regret to say that, after full and anxious consideration, I have found myself unable to differ from the conclusions arrived at by the Sheriff-Substitute, whose interlocutor I have accordingly affirmed. A crucial circumstance in the case is the positive identification of Lambie as the person present at the examination of January, 1892 by no fewer than five witnesses, none of whom has any interest whatever in the result of the case, or any conceivable motive to say anything except what he believes to be the exact truth. No doubt, three years have elapsed since the witnesses to whom I am referring saw the man whom they profess to identify. If there had only been one or two of them, the theory of a mistake on that ground could have been admissible; but here the Sheriff Substitute has observed the cumulative force of their evidence is very strong, and I cannot bring myself to believe that the whole five are mistaken, more especially when I find that the proof contains what I cannot but regard as pregnant corroboration of their testimony. I refer especially to the evidence regarding the statements made by Lambie, who avers to companions of his having passed pursuer's examination, and more particularly to the evidence of one of these companions, Taylor, who swears that Lambie, when telling him about having passed the examination, spoke about having met there 'a fellow from Kirkcaldy,' a description which applies accurately to either of the Bowmans. I see no reason to doubt Taylor's credibility; and I can hardly imagine that he should have invented the remark just mentioned. Then, again Lambie's story of his visit to Edinburgh on that particular day appears to me an extremely lame and improbable one. It was urged, indeed, that his admission that he had been in Edinburgh on the day of the examination was a point in favour of his general credibility, as but for that admission it would not have been known that he was in Edinburgh that day; but it seems to me that his admission may be due to the fact that he knew or suspected that the privileged tickets which he says he obtained from his father for the use of himself and his friend might be still in existence, and might on examination be found to bear marks showing that they had both been in Edinburgh. Be that as it may, I have found on a study of the proof a decided impression that he, and not the pursuer, sat for the examination in question; and agreeing as I do

with the whole of the Sheriff-Substitute's note, I think it would serve no good purpose to go into further detail. I cannot, however, part with the case without saying that the defender's conduct in the whole transaction strikes me as somewhat extraordinary, and not the conduct which might have been expected from a man in his position.

### SMASHING A CHEMIST'S WINDOW.

AT the Liverpool Assizes on Saturday last, before Lord Russell of Killowen, J. L. Jones, chemist and druggist, Mill Street, Liverpool, sued John Owen, team-owner, for damages occasioned by defendant's horse. On December 31 last, the horse—which is an entire one—was attached to a lorry on which there were some empty barrels. It had scarcely emerged from the owner's yard when it commenced to be restive and bolted into Mr. Jones's window. The three show-carboys were smashed and deluged the stock in the window, whilst the plate glass of the window was finely splintered over sponges, bath-gloves, loafahs, &c. The window-enclosure was destroyed as well as some of the interior fixtures, and a claim was lodged with the team-owner for the damage. Being insured, he turned it over to the insurance company, whose agent upon visiting the scene of the disaster said that "a pound or two would put all that right." On behalf of the plaintiff several eye-witnesses of the accident were called, with the object of showing that the horse was not being led but allowed a free head. Upon the question of damages, the plaintiff's counsel called Mr. J. Shacklady, chemists' valuer, who said he inspected the stock and fixtures affected, and assessed the damage done at 43*l.* 18*s.* 3*d.*, although he believed that about 4*l.* less had been expended upon repairs to fixtures than he had estimated would be necessary. The inventory of the damaged goods was made the subject of a number of pleasantries by the defendant's counsel and the Court generally. Lord Russell said he could scarcely credit, for instance, that so many sponges could be absolutely destroyed. Witness explained that 12 gallons of coloured water from the broken carboys had been thrown over the stock in the window, besides innumerable splinters from the broken window-pane, rendering them dangerous to users and exceedingly risky for the reputation of the seller. The Court seemed astonished that the coloured carboys owed their colour to the liquids contained, being previously under the impression that the glass itself was coloured.

On behalf of the defendant, witnesses were called who gave the horse a good character, saying it had never previously gone through chemists' or any other tradesman's window.

In summing up, Lord Russell said the first question was whether the defendant was legally liable for any damages. It was not illegal for an entire horse to be used for draught purposes. It therefore remained for the plaintiff to show that the horse had previously been guilty of such behaviour as would render its employment in that capacity dangerous. Although this previous bad character had been alleged it had not been proved. There was a third consideration—"was the horse under proper control?" If the horse had up to the moment of bolting been under proper control, and had suddenly wrested itself away, they must give a verdict for the defendant. A horse bolting under such conditions and occasioning damage could not render its owner liable. As to the amount of damages—should they find a verdict for the plaintiff—he would leave them to assess, handing them as they retired from the jury-box the inventory put in. The jury, after deliberating 25 minutes, returned to court and gave a verdict for the plaintiff. Damages 31*l.* 10*s.*, and costs.

### ADULTERATED GINGER.

CHARLES KNIGHT, of Great Francis Street, chemist and druggist, was summoned at the Birmingham Police Court on March 22, under the Food and Drugs Act, for selling adulterated ground ginger. The sample taken by the inspector contained 50 per cent. of exhausted ginger. Defendant was fined 10*s.* and costs.



## Bankruptcies and Failures.

**Re JOSEPH C. MACRAITH** (trading as the Liffey Oil and Caemical Works), 4 Fish Street, North Wall, Dublin.

THIS debtor has called a meeting of his creditors, at which a statement of affairs was presented showing unsecured liabilities amounting to 1,885*l.*, and assets, after deducting the claims of preferential creditors payable in full, amounting to 486*l.*

The following is a list of the principal creditors concerned hereunder:—

|                                         | £   | s. | d. |
|-----------------------------------------|-----|----|----|
| Anglo-American Oil Company .. .. .      | 40  | 0  | 0  |
| Barford & Perkins, Peterborough .. .. . | 12  | 0  | 0  |
| Barnard, E. S., Dublin .. .. .          | 44  | 0  | 0  |
| Batley & Butler, London .. .. .         | 12  | 0  | 0  |
| Boyd, Samuel, Dublin .. .. .            | 52  | 0  | 0  |
| Candle & Co., Dublin .. .. .            | 103 | 0  | 0  |
| Garton, E. & D., Dublin .. .. .         | 12  | 0  | 0  |
| Gibbs & Co., London .. .. .             | 188 | 0  | 0  |
| Hall, R. & H., Dublin .. .. .           | 35  | 0  | 0  |
| Head, A., Birr .. .. .                  | 150 | 0  | 0  |
| Hoyle & Son, Dublin .. .. .             | 15  | 0  | 0  |
| Jackson, F. R., Athy .. .. .            | 12  | 0  | 0  |
| Keen & Co., Dublin .. .. .              | 16  | 0  | 0  |
| Lawes Chemical Company, Dublin .. .. .  | 65  | 0  | 0  |
| Lecky, J., Dublin .. .. .               | 33  | 0  | 0  |
| Long, W., London .. .. .                | 121 | 0  | 0  |
| McMaster, Hodgson & Co., Dublin .. .. . | 16  | 0  | 0  |
| Moreton & McGrath, Limerick .. .. .     | 104 | 0  | 0  |
| Moreton, J., Limerick .. .. .           | 88  | 0  | 0  |
| Richards, H., Dublin .. .. .            | 20  | 0  | 0  |
| Ross & Walpole, Dublin .. .. .          | 39  | 0  | 0  |
| Steinoff, Sons & Co., London .. .. .    | 35  | 0  | 0  |
| Symonds, W., London .. .. .             | 24  | 0  | 0  |
| Van de Wael & Co., London .. .. .       | 20  | 0  | 0  |

**Re ROBERT WHITTON BECKETT, Shipdham, Dealer in Drugs and General Dealer.**

THIS debtor was examined at the Norwich Bankruptcy Court on March 20. The liabilities amount to 898*l.* 18*s.*; and the assets show a deficiency of 463*l.* 3*s.* Debtor, who took the business in Shipdham in February, 1894, when he was not quite 22 years old, had been partially trained for the medical profession, and as a medical student had got heavily in debt. He had served as an assistant to two or three medical men and been six months in a hospital. When he took the Shipdham business he owed 180*l.*, some of the debts being several years old. Six weeks afterwards he married. He was put into the Shipdham business by his mother-in-law and his brother, who provided him with 400*l.* for the purpose. He had no experience of the business further than having helped his father in a wholesale drug establishment at Soham. For the Shipdham business 350*l.* was given, 300*l.* for the stock and 50*l.* for the goodwill; and he had to keep on an assistant at 35*s.* a week till August because he was not qualified to sell poisons. He reckoned that during the twelve months he was in the business he took out of it 80*l.* for house and living expenses, besides paying 100*l.* off his debts. The value of the stock he found to be about 200*l.*, while the 50*l.* for the goodwill was gone. By his father's will one-fourth share of his property was bequeathed to him, but it was in land and had not yet been realised. But he had anticipated his share amounting to about 600*l.* A great deal of that money had been frittered away in costs. A gold watch, chain, and pendant that cost about 26*l.* had been pledged at Leicester for 10*l.* Some furniture, which was bought of Lambert at Dereham, bankrupt thought belonged to his wife, but Mr. Gould found, on examining closely into the matter, that the ownership of it was in the debtor. Mr. Lambert elicited that debtor bought a typewriter of Messrs. Jarrold for 22*l.*, paid 12*l.* on account, and gave it up to them last autumn in liquidation of the debt due upon it. This closed the examination.

**Re R. G. CLEMENTS, Jewry Street, E.C., Drug-merchant.**

THE receiving-order in this case was made on February 26, on the petition of a creditor, and accounts have now been

filed showing unsecured liabilities 1,174*l.* 9*s.* 1*d.*, and no available assets. The bankrupt states that he formerly assisted his father, who carried on business as a drug-merchant at Jewry Street, E.C. He was admitted a partner by his father in 1878, and the business was subsequently carried on under the style of "R. G. Clement & Son," until the death of his father in August, 1883. He then continued the business alone under the same name until September, 1893, when owing to a falling off in the business he discontinued trading, and the stock and fixtures were seized for arrears of rent. He adds that he has had no occupation since September, 1893, but has been in receipt of a voluntary allowance from his mother amounting to 1*l.* per week. He attributes his insolvency chiefly to loss on trading and to law-costs incurred in connection with an action brought against him about 1890. The liabilities include a sum of 690*l.* due to the trustees under his father's will for interest on capital left in the business at the date of his father's death. The other claims are principally for goods supplied. The bankrupt states that he sold his reversionary interest under his father's will in December last for 20*l.* The first meeting of creditors was held on March 12, when no resolution was passed, and under the order for summary administration the Official Receiver is the trustee.

## Deeds of Arrangement.

**Clarke, John Greaves** (deceased), late of Nottingham, chemist and druggist (by administratrix). Trustee, Samuel P. Derbyshire, Nottingham, accountant. Dated, March 21; filed, March 26. Unsecured liabilities, 144*l.* 17*s.* 1*d.*; estimated net assets, 167*l.* 2*s.* The following are scheduled as creditors:—

|                                                  | £  | s. | d. |
|--------------------------------------------------|----|----|----|
| Evans, Sons & Co., Liverpool .. .. .             | 31 | 0  | 0  |
| Exchange Loan Club (Limited), Nottingham .. .. . | 38 | 0  | 0  |
| Messrs. Southalls & Co., Birmingham .. .. .      | 17 | 0  | 0  |
| Wyleys & Co., Coventry .. .. .                   | 12 | 0  | 0  |

(And creditors under 10*l.*)

**Crawley, Benjamin**, 205 Westminster Road, Kirkdale, near Liverpool, chemist and druggist. Trustee, Wm. H. Walker, 42 Castle Street, Liverpool, accountant. Dated, March 20; filed, March 23. Unsecured liabilities, 1,173*l.* 3*s.* 1*d.*; estimated net assets, 84*l.* 16*s.* 4*d.*; preferential creditors, 39*l.* 3*s.* 8*d.* The following are scheduled as creditors:—

|                                              | £     | s. | d. |
|----------------------------------------------|-------|----|----|
| Bankers' claims .. .. .                      | 1,090 | 0  | 0  |
| Jackson, Henry, & Sons, Brooks Alley .. .. . | 12    | 0  | 0  |
| Southall Bros. & Barclay, Birmingham .. .. . | 25    | 0  | 0  |
| Sumner, R., & Co., Liverpool .. .. .         | 35    | 0  | 0  |
| Thompson, John, Limited, Liverpool .. .. .   | 26    | 0  | 0  |

**Grace, George**, Temple Street, Castleford, mineral-water manufacturer. Trustee, Enoch Parkin, Castleford, accountant. Dated, March 21; filed, March 26. Unsecured liabilities, 143*l.* 4*s.*; estimated net assets, 30*l.* The following are scheduled as creditors:—

|                                   | £  | s. | d. |
|-----------------------------------|----|----|----|
| Rogers, W. H., Castleford .. .. . | 11 | 0  | 0  |
| Watson, T. H., Leeds .. .. .      | 55 | 0  | 0  |

(And creditors under 10*l.*)

**Reynolds, Annie** (widow), Tuxford, chemist and druggist, and post-office mistress. Trustee, Joel Haslam, Workson, gentleman. Dated, March 15; filed, March 20. Unsecured liabilities, 340*l.* 14*s.*; estimated net assets, 150*l.*

|                                       | £   | s. | d. |
|---------------------------------------|-----|----|----|
| Balliffo, —, Newark-on-Trent .. .. .  | 10  | 0  | 0  |
| Battle, Son & Maltby, Lincoln .. .. . | 20  | 0  | 0  |
| Cooling, —, Newark-on-Trent .. .. .   | 10  | 0  | 0  |
| Duffy, J. N., Tuxford .. .. .         | 17  | 0  | 0  |
| Duke of Newcastle (rent) .. .. .      | 1.7 | 0  | 0  |
| Hirst, Brooke & Hirst, Leeds .. .. .  | 20  | 0  | 0  |
| Morley & Co., Hull .. .. .            | 40  | 0  | 0  |
| Sponcer & Sons, Gainsborough .. .. .  | 25  | 0  | 0  |
| Talbot, —, Tuxford .. .. .            | 16  | 0  | 0  |
| Whittington, Dr., Tuxford .. .. .     | 10  | 0  | 0  |

**Taylor, James**, "The Yankee Bar," 33A Market Street, and 1 Ashfield Road, and 1 Tates Terrace, off Curzon Street, Burnley, confectioner and mineral-water manufacturer. Trustee, Fredk. Foster, 20 Thomas Street, Burnley, accountant. Dated, March 20; filed, March 23. Unsecured liabilities, 439*l.* 13*s.* 11*d.*; estimated net assets, 318*l.*; creditors fully secured, 32*l.* Deed of inspectorship and assignment.



Debtor to realise his business within six weeks from date hereof, and pay the creditors a composition of 10s. in the £. If the proceeds should be insufficient to meet the said composition, the debtor to make up the same by instalments of 2s. 6d. at intervals of three months from date of sale. The following are scheduled as creditors:—

|                                                   | £   | s. | d. |
|---------------------------------------------------|-----|----|----|
| Alexander, A., & Co., London .. .. .              | 21  | 0  | 0  |
| Benedictus, Henry, London .. .. .                 | 14  | 0  | 0  |
| Braewell, William, Burnley .. .. .                | 25  | 0  | 0  |
| Bratby & Hinchliffe (Limited), Manchester .. .. . | 20  | 0  | 0  |
| Bush, W., & Co., London .. .. .                   | 20  | 0  | 0  |
| Chapman & Son, Birkenhead .. .. .                 | 45  | 0  | 0  |
| Dodds, James, Manchester .. .. .                  | 20  | 0  | 0  |
| Foster, Frederick, Burnley .. .. .                | 32  | 0  | 0  |
| Hargreaves, Maden & Sons, Burnley .. .. .         | 11  | 0  | 0  |
| Harrison, Mrs., Burnley .. .. .                   | 31  | 0  | 0  |
| Ormerod Brothers, Rochdale .. .. .                | 12  | 0  | 0  |
| Taylor, John, Manchester .. .. .                  | 15  | 0  | 0  |
| Taylor, Richard, Haslingden .. .. .               | 11  | 0  | 0  |
| Union Loan Office, Burnley .. .. .                | 160 | 0  | 0  |

**Tull, Charles John**, 12 Shobnall Street, Burton-on-Trent, mineral-water manufacturer. Trustee: John F. Dyson, 5a & 22 Commercial Buildings, Leeds, accountant. Dated, March 16; filed, March 23. Unsecured liabilities, 212*l.* 1*s.* 4*d.*; estimated net assets, 137*l.* 1*s.* The following are scheduled as creditors:—

|                                            | £  | s. | d. |
|--------------------------------------------|----|----|----|
| Buxton & Thornley, Burton-on-Trent .. .. . | 13 | 0  | 0  |
| Ford, H. J., Burton-on-Trent .. .. .       | 82 | 0  | 0  |
| Meadowcroft, W., Blackburn .. .. .         | 10 | 0  | 0  |
| Manders, F. W., Burton-on-Trent .. .. .    | 11 | 0  | 0  |
| Nuttall & Co., St. Helen's .. .. .         | 13 | 0  | 0  |

## New Companies and Company News.

**JOSEPH TERRY & SONS (LIMITED).**—Capital 50,000*l.*, in 10*l.* shares. Objects:—To acquire, take over as a going concern, and carry on the business of wholesale and retail confectioners and medicated-lozenge manufacturers and otherwise, carried on by Joseph Terry & Sons at York, and to enter into an agreement with Sir Joseph Terry and Thomas W. L. Terry for the purpose. The first subscribers (who each take one share) are:—J. Terry, knight, Hawthorn Villa, Mount Villas, York; Lady Terry, same address; T. W. L. Terry, 42 Blossom Street, York, confectioner; Mrs. Terry, same address; S. S. Terry, St. Helen's Square, York, confectioner; Miss F. H. Terry, Hawthorn Villa, &c.; H. G. Blackburn, 2 East Parade, Leeds, chartered accountant; W. Walker, 14 Bootham Terrace, York, solicitor. The first directors are: Sir Joseph Terry, knight, and Thomas W. L. Terry, who are permanent governing directors. Remuneration of the former, 200*l.* per annum; of the latter (who is to devote all his time and attention to the company's affairs), 600*l.* per annum, and one-half of the profits remaining after making provision for reserve, and paying a 5 per cent. dividend.

**UNITED KINGDOM OIL AND MEAL COMPANY (LIMITED).**—Capital 10,000*l.*, in 1,000 "A" and 1,000 "B" shares of 5*l.* each. Objects:—To enter into an agreement with The Parent Syndicate Lightning Oil Extractor Company (Limited), and to acquire, turn to account, develop and deal with patented invention and other rights relating to the extraction and manufacture of (1) oil or meal from rape, nuts, or other oleaginous substances, (2) resinous substances, essential oils and balsams, and (3) sulphur, chemicals, and other results from ores and other substances. The first subscribers (who take one share each) are:—R. C. H. Bonsor, Glenhurst, Saltaire, dye manufacturer; H. C. A. Quitzow, 6 Oak Villas, Bradford, yarn merchant; L. H. Berens, Wells Terrace, Ilkley, journalist; A. Holmes, Earl Villa, Keighley, retired; J. W. Cockerham, Heather Bank, Bingley, retired; J. L. Morley, 54 Ash Grove, Bradford, engineer; H. A. A. Dombain, 9 Yew Bank, Ilkley, engineer. The first directors (to number not less than five) are:—B. Barton (managing director), William H. Wellsted, Alfred Quitzow, John L. Morley, and another, whose name is not given. Qualification, 2,000*l.* Remuneration, 50*l.* each per annum. Registered office, Cogan House, Hull.

**LEWIS AND BURROW'S DRUG-STORES (LIMITED).**—Capital 100,000*l.*, in 1*l.* shares (30,000 6 per cent. cumulative preference 6*l.* 9*s.* 9*d.* ordinary, and 100 deferred). Objects:—To acquire and carry on the following:—"Burrow's Drug-stores," at 243 Brompton Road, S.W., and 78 Westbourne Grove, W.; "Matterson's Drug-stores," at 108 New Oxford Street, W., and 80 Wigmore Street, W.; "Lewis's Drug-stores," at 22 and 24 Great Portland Street, W., 212 Kilburn High Road, N.W., and 64 Baker Street, W.; "Griffith's Drug-stores," at 274 Seven Sisters Road, N.; "Trick's Drug-stores," at 92 Green Lanes, N., and 6 Cazenove Road, Stamford Hill, N.; and "Bowden's Drug-stores," at 208 Edgware Road, W., and for that purpose to enter into an agreement with Wm. B. Trick, Jonas H. Lewis, J. Kitching Matterson, and John E. Griffiths. The first subscribers (who each take one ordinary share) are:—L. B. Peters, Garston Manor, Watford, Herts, contractor; J. R. Brongh, 29 Alexandra Villas, Finsbury Park, N., wholesale stationer; W. B. Trick, 66 Queen Elizabeth's Walk, Stoke Newington, N., chemist; J. H. Lewis, Lleben Lodge, Norfolk Road, N.W., chemist; J. K. Matterson, 108 New Oxford Street, W., chemist; J. E. Griffiths, 11 St. John's Road, Putney, S.W., chemist; R. Maconochie, 7 Southampton Street, Bloomsbury, W., secretary. The first directors (to number not less than three nor more than seven) are to be appointed by the subscribers. Qualification, 250*l.* Remuneration, chairman, 250*l.* per annum; others, 150*l.* each.

**PONTYPRIDD DRUG COMPANY (LIMITED).**—The following three resolutions were passed at a meeting held at the registered office, 9 High Street, Pontypridd, Glam., on February 25, and confirmed on March 15:—(1) For the voluntary liquidation of the concern; (2) for the appointment of William Thomas, draper, of 3 High Street, Pontypridd (the secretary of the company) as liquidator; and (3) for the sale of the company's undertaking to David W. Davies, chemist, of 9 High Street, Pontypridd, for the sum of 460*l.* The company was registered on November 23, 1894, with a capital of 2,000*l.*, in 10*l.* shares, to carry on the business of wholesale and retail chemists in all its branches. The only return, made up to March 11, and filed on March 15, shows that the seven signatories' shares are the only ones taken up, and that the full amount has been called and paid.

**MUSPRATT BROTHERS & HUNTLEY (LIMITED).**—This is one of the concerns which were absorbed into the United Alkali Company (Limited), and the liquidator has called a final meeting of the shareholders for April 27. The concern was registered on June 22, 1886, with a capital of 200,000*l.*, in 10*l.* shares, to acquire and undertake the chemical and metal extraction works, premises, goodwill and all or any of the liabilities of Muspratt Brothers & Huntley, manufacturing chemists, of Flint. The last return was filed on August 30, 1890, when 8,470 shares were taken up and paid for in full. The principal shareholders were John K. Huntley, of 20 Hyde Park Street, London, alkali manufacturer (4,189 shares); and Edmund K. Muspratt, of 31 Dale Street, Liverpool, alkali manufacturer (4,193). The resolution for the voluntary winding-up and the transfer to the United Alkali Company was passed on May 6, 1891, and confirmed June 5 following.

**S. G. CLEMENTS & Co. (LIMITED).**—The members of this concern met on March 20 at the registered offices, Nos. 12, 13, and 14 Lewin's Mead, Bristol, and passed a resolution for voluntary winding-up, appointing John E. Skuse the liquidator. The company was registered on July 23, 1892, with a capital of 10,000*l.*, in 10*l.* shares, to acquire and carry on the business of wholesale druggists and manufacturing chemists carried on as "S. G. Clements & Co." at 12, 13, and 14 Lewin's Mead, Bristol. At the time of the last return (August 22, 1894) 400 shares were taken up, and 135 were issued as fully paid. The full amount has been called and paid on the remaining 265 shares. A great change has taken place in the holdings between the time of making up the previous return and this one, and the largest shareholders now are Chas. G. Clarke (172 shares) and Henry Potter (171), both of 6 Raven Row, London, druggists.

**PATER** (looking over the paper): "McBolas, Drugg & Co. are selling all sorts of patent medicines at half-price." Mater: "Just our luck; and not a thing the matter with one of us."



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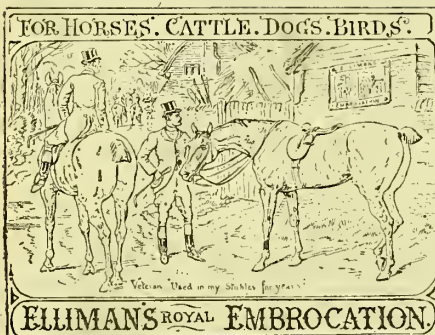
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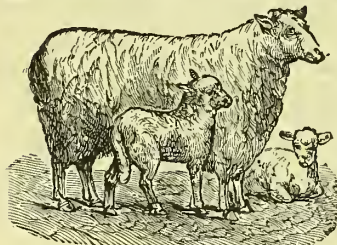
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Editorial  
Comments

## JOINT-STOCK PHARMACY.

In an article on "Company Pharmacy" published in this journal on December 18 last we stated: "We hear of a syndicate being formed by the proprietors of about a dozen of the most 'modern' pharmacies in the west of London, with a view of offering these brilliant enterprises to the public. The proprietors, it appears, are getting tired of the monotony of raking in their profits and want outsiders to come in and help them." The offer we predicted was made to the public on Friday last, when "Lewis & Burrows's Drug Stores (Limited)," with a share-capital of 100,000l., was announced.

The property to be taken over by the company consisted of the following eleven businesses—namely, two known as Burrows's Drug Stores (Brompton Road and Westbourne Grove), two known as Matterson's Drug Stores (New Oxford Street and Wigmore Street), three of Lewis's Drug Stores (Great Portland Street, Kilburn, and Baker Street), two of Trick's Drug Stores (Green Lanes and Stamford Hill), Griffith's Drug Store (Seven Sisters Road), and Bowden's Drug Stores (Edgware Road). The owners of this group of businesses are willing to sell them to the public—leases, stock, fixtures, plant, and goodwill, for 65,900l.—namely, 33,900l. in cash, 18,000l. in ordinary shares, 100l. in deferred (or founders') shares, and 13,900l. in cash or shares "at the option of the directors," who will practically be themselves. They also provide (though this does not appear in the prospectus) for four directorships (themselves being the majority) at 150l. a year each, a chairman at 250l. a year, and something we suppose for the manager.

And what is the public to get for this 65,900l.? They are



to have 16,139*l.* 10*s.* 6*d.* worth of stock, taken, we are told, at cost price, and 17,791*l.* 19*s.* 2*d.* worth of leases, fixtures, and plant, this amount being the valuation by Messrs. Joseph Hibbard & Son, of 9 Walbrook. That leaves 31,968*l.* 10*s.* 4*d.* as the price of the goodwill.]

We are often asked by correspondents to give them an estimate of the value of the goodwill of a business returning such and such an amount, and with an annual profit also indicated. We have always confessed our inability to work out such a sum. Goodwill, it seems to us, depends largely on special circumstances. If a business can be sold to a capitalist who can have it managed for him and clear 10 to 20 per cent. on his outlay, there is some goodwill to be sold; but if a man after working 365 days can only get what he might fairly expect to earn if he sold his services to some one else, we do not see where the goodwill comes in. So, too, the prospects of opposition, the monopolies connected with the business, the locality, are among the items for consideration. In former days the length of time the business had been established was supposed to count for a good deal; in these democratic days we fear there is less respect paid to blue-blooded shops than was once the case.

But Messrs. Trick, Lewis, Matterson & Griffith show us that the way to realise a handsome price for goodwill is to sell businesses to a limited liability company. We are informed that the public subscription for the ordinary shares more than covers the 31,900 offered, and that the subscription for 25,000 6 per cent. preference shares is not far short of that amount. So that it may be taken that, in the opinion of the public, too much has not been asked. The average annual profits of the eleven shops are stated to be 6,905*l.* 12*s.* 3*d.* This is the only figure we can rest upon, for we utterly fail to make out the meaning of the passage which follows in the certificate of Messrs. Ward & Wilding, chartered accountants. They say—

We also certify that the profits for the last twelve months of the period amount to the sum of 7,552*l.* 10*s.*, thus showing a considerable increase in the profits of the last year as compared with the average mentioned above.

The figures given above as being the amount of the last year's profit are ascertained by taking, so far as four of the shops are concerned—viz., Green Lanes, Stamford Hill, Edgware Road, and Westbourne Grove—the same amount as the annual average, seeing that the actual profit for that particular period of those four shops could not be arrived at.

Why cannot the actual profit of the four last-named shops be arrived at? If it cannot, why give any estimate at all?

But whatever the case may be as to the profits in 1894, we make out that the shareholders are paying Messrs. Trick, Lewis, Matterson & Griffiths fully four-and-a-half years' profits for the goodwill; are taking over their stock, fixtures, leases and plant, &c., at their own valuation; are binding themselves to pay them and their friends 1,000*l.* a year in salaries; and are to give them half the profits after 10 per cent. has been paid to the ordinary shareholders.

The *Evening News* has pointed out that strictly according to the prospectus ("100 deferred shares of 1*l.* each, entitled to one-half the profits after 10 per cent. has been paid on the ordinary shares") it will only be necessary to pay that 10 per cent. once, and that for ever afterwards the holders of the 100 deferred shares can take half the profits. We do not suppose this was the intention, but shareholders may reasonably ask to have the possibility of doubt removed.

There are other points of interest suggested by this prospectus. One is the intention to establish one wholesale depot and warehouse for all the businesses; another is the expressed intention of the company to open additional branches in the best thoroughfares of the metropolis; and, lastly, it will be

of interest to other chemists to compare the figures quoted in regard to stock, turnover, and profits. The stock in these eleven shops is put down at 16,139*l.* 10*s.* 6*d.*; last year's turnover is given as 49,019*l.* 6*s.* 9*d.*; and the net profit at about 7,000*l.*

We do not by any means wish to imply that the public are not getting a fair bargain; but the vendors, we think, may be congratulated on having done well for themselves. Five of their eleven businesses have been established within the past five years, and only one can boast of a history back into the seventies. Whether the joint-stock system is calculated to promote the best interests of the art of pharmacy or not, it certainly seems to offer a promising method for the disposal of businesses at good prices.

## ARGON AND HELIUM.

ONE of those strange coincidences which happen in science, as in other walks of life, is provided in Olszewski's liquefaction of hydrogen and Ramsay's discovery of helium, a gas so rarified that it may be impracticable to take it as unity. Liquid hydrogen, with nothing to apply it to, no other gas to liquefy, seemed a scientific anomaly almost, and we welcome helium as a providential outlet for future energies. The latest particulars regarding the gas are given in our report of the Chemical Society's anniversary meeting. It is a hypothetical body, known hitherto to astronomers, and chemists need not hesitate to confess ignorance of it, for there is nothing about it in any of their text-books. Nor is there much about cleveite, the mineral or heavy earth which Nordenskiöld discovered, and Hildebrand investigated. The nitrogen which the latter separated from it Professor Ramsay now finds to be a mixture of argon and helium. We do not gather that the helium was separated as such; its existence has only been inferred, by Mr. Crookes, from the spectrum. Still Professor Ramsay has felt equal to saying that helium is an extremely rarified gas, and he speaks of obtaining it in quantities ere long. To give the fancy free play with helium is to run riot with present impossibilities. For instance, there is the question of aeronautics. Given a gas five, ten, or twenty times lighter than hydrogen, and the problem of moving as we like in the air may be solved. But we have not yet caught helium *per se*. And there are more important, more interesting, facts in regard to the discovery. Parisians were before us in learning of it. At the meeting of the Academy of Sciences on Monday M. Berthelot stated that he had on Saturday received from Professor Ramsay a telegram to the following effect:—

Gas obtained by me from cleveite. Mixture of argon and helium. Crookes identified spectrum. Make communication to Academy of Sciences on Monday.

M. Berthelot explained that Professor Ramsay had thus made a novel and very important discovery, since he had isolated argon from a natural mineral—cleveite. By his new observations Professor Ramsay demonstrates the existence of argon as a stable compound in a natural substance; moreover, he shows that it is associated therein with the hypothetical element helium, which physicists have hitherto recognised only in the solar spectrum and in the spectrum of the *aurora borealis*. This spectrum has thus for the first time been observed in a terrestrial body. M. Berthelot added that these facts throw new light on certain peculiarities which he has observed during his own researches on argon, and upon which he could not venture to hazard an opinion at the last meeting. He had then observed that when the electric discharge was passed through a tube of argon at ordinary pressure, there was emitted in the tube a peculiar fluorescent



light, and examined by the spectroscope this showed lines approximating to those of helium and argon. He thought, if it were permissible to conjecture on such a new subject, that these phenomena are correlated to those observed in the *aurora borealis*, and he suggested that the Northern lights are the result of the atmospheric electric discharge producing this curious fluorescent body from argon. Indeed, it may be that helium itself is only a special modification of argon. It is probable that M. Berthelot is wrong in this conjecture, but he was generous in stating that Professor Ramsay's discovery is one of the most important of recent times, and its consequences, both from the chemical point of view and from its incidence upon the interpretation of cosmic and meteorological phenomena, are, he thinks, incalculable. The Paris correspondent of the *Daily News* has been good enough to add, on her own responsibility apparently, that helium is the cause of the bitterness of the east wind; but this is too keen a flight of fancy to follow. The significance of the discovery of argon in some other place than the atmosphere should not be overlooked, and we may mention that M. Berthelot has found that the yellowish resin which he obtained from argon and benzene decomposes on being heated, forming alkaline volatile products and a carbonaceous residue, which M. Berthelot concludes are evidence that argon assimilates closely with nitrogen. He thinks that if we assume 42 instead of 40 as the molecular weight of argon—an assumption which the limits of error in the experiments hitherto made do not, in his opinion, exclude—this weight would represent one and a half times that of nitrogen; in other words, argon would stand to nitrogen in the same relation as ozone to oxygen. There is to be considered, however, the new statements in regard to the composite nature of nitrogen and oxygen.

#### GEORGE WEST SARGENT.

WE record this week the tragic end of the strange Kensington chemist whose incoherent and incomprehensible letters have sometimes amused and sometimes annoyed members of the trade for some years past. Mr. Sargent first figured in the pharmaceutical arena in 1890, when a few "progressive" candidates made a gallant effort to change the policy of the Council of the Pharmaceutical Society in a trade direction. Mr. Sargent was stated to be one of the organisers of the discontented party, who, it may be remembered, were soundly beaten at the poll. Soon afterwards the shower of letters began. Chemists all over the country and public bodies with which they were connected, received vague intimations that the law was being infringed in some unexplained manner. Generally these letters began: "I am instructed by the Committee," or ended "By order of the Committee." Sometimes they seemed to be absolutely meaningless; at other times they contained charges of fraud. The following was one of the letters addressed to the Town Clerk of Dover, upon which, in February 1892, proceedings were taken against Mr. Sargent by Mr. Alexander Bottle, then vice-president of the Pharmaceutical Society:—

75 Church Street, Kensington, W.  
January 21, 1892.

*Transit, Storage, &c., of Poisons and Inflammable Drugs.*  
Re Alexander Bottle, 37 Town Wall Street, Dover.

Dear Sir,—I am instructed to inquire the reason no criminal proceedings have been instituted against the above with regard to abstractions of poisons regulations from the various issues of the calendar of the Society which appear in the issue of 1890, page 45.

The Corporation of Dover continues to be reported badly, and places the whole country in confusion and alarm.

Yours truly,  
G. W. SARGENT.

In this case Mr. Sargent was treated with much leniency. On the first trial he was bound over in his own recognisances,

under a penalty of 50*l.*, to be of good behaviour and to come up for judgment when called upon, and afterwards, when he had continued the libels, Mr. Justice Wills allowed the recognisances to be enlarged to 100*l.*, and Mr. Sargent was given another chance. Next, he got into trouble with the Chemists' Aerated and Mineral Waters Association over a letter he wrote to that company's bankers, indicating that they were somehow violating the Pharmacy Act. In the course of an action resulting from this letter Mr. Sargent said "the plaintiff Association had no existence legally. The shareholders were nearly all retail chemists carrying on the wholesale business illegally." We have not the smallest idea what he meant. On this occasion he had to pay 5*l.* damages and costs. In defending him in Mr. Bottle's action his counsel said "he appeared to have formed some hallucination upon some subjects. A large wholesale business, not strictly a chemist's, had been set up in opposition to him, and the result had been that he had formed opinions that, in the matter of wholesale dealings in drugs and poisons, small chemists were treated unfairly." We do not know whether he had any other grievance against the Pharmaceutical Society, which he seemed to hold responsible for whatever went wrong in pharmacy. He declined to be interviewed, but went plodding on, attending closely to his business, and still, at intervals, writing these letters.

Very pathetic was the letter found in his house, beginning "Dearest Maid." Evidently he had realised the truth of one of the oldest dicta which the world has learned, that it is not good for man to be alone. A good wife and domestic interests would very likely have saved Mr. Sargent from his worries, and would, at least, have saved him from the sad death which he seems to have brought on himself. He really wanted someone to cook for him. The Pharmaceutical Society, as a bugbear, would have been shorn of its fascination in the presence of regular and substantial meals.

#### CRYSTALLISED GLYCERINE.

GLYCERINE, although a "sweet principle," is not a tractable body. Its thick, viscous nature and polyatomic position in the alcoholic scale indicate that it should not be difficult to crystallise, but its hygroscopicity is against that supposition, and as a matter of fact crystallised glycerine is one of the rarest phenomena known to chemists. We have lately had one instance of it brought under our notice by Mr. Brasington, of Horsham, and a second is mentioned to us by a Midland firm, who have at present half a ton of solid glycerine in their warehouses—the result of the recent intensely cold weather. Doubtless, others have observed the phenomenon of late. A specimen which we received three or four weeks ago still exhibits a well marked crystalline deposit, and if the specimen were kept at a temperature not far exceeding 15° C. the crystals, we expect, would remain indefinitely. Mr. Edward Bevan has obtained some crystals from the same lot, and has commenced a series of experiments which may lead to interesting results. The subject is one which certainly deserves attention, and while it is topical it may be useful to call attention to the chief facts recorded about it.

As far as we are aware, the first observations on the subject were made in the cold winter of 1866-67. A quantity of glycerine sent from Germany to England in January of the latter year was found on arrival to be solidified to a mass like sugar candy, and composed of shining, apparently octahedral crystals about the size of peas, having a strong refractive power, grating between the teeth, and exhibiting the reactions of chemically-pure glycerine. Dr. J. H. Gladstone examined the crystals and reported his results to



the Chemical Society; Mr. Crookes also wrote about the matter in the *Chemical News*. They observed that the mass during fusion exhibited a constant temperature of  $7.2^{\circ}\text{C}$ . and that after complete fusion the glycerine did not crystallise even when cooled to  $-18^{\circ}\text{C}$ . In 1870 Krause discovered a method of crystallising glycerine (but kept it secret), and it was applied in Sarg's works at Liesing with the object of purifying glycerine, the crystals being freed from the mother-liquor in a centrifugal machine, then dried and melted. The crystals melted at  $20^{\circ}\text{C}$ . Von Lang examined them with the goniometer, and found them orthorhombic, with the axial ratio  $a : b : c = 0.70 : 1 : 0.66$ . We referred to this in describing the Vienna Apothekers' Exhibition of 1873 (*C. & D.*, July, 1873, p. 226). Speaking of Sarg's exhibit, we said:—

Glycerine does not freeze in even very cold weather, and is, therefore, an excellent lubricant and very useful in gas-meters. This property of glycerine is so well known that the several glass vessels filled with some really beautiful crystals of glycerine and modestly occupying the corners of the Milly Monument attracted especial attention. Like phenoline, benzoline, and many other organic combinations, glycerine only crystallises in a state of perfect purity, and the minutest foreign matter deprives it of this property. Once in a solid state it will only melt in a high summer temperature. Under certain conditions the crystals attain a size which allow their angles to be measured. Whether in practice this glycerine will be extensively used is very questionable, owing to its naturally high price; it is, however, certain that for scientific experiments it will be of great service.

In our issue for March 1874 we printed a note by Mr. A. H. Mason, in which he says that absolute purity is not necessary to bring the glycerine to the crystalline state, and our recent experience corroborates this observation. Nevertheless, Dr. P. van Hamel Roos in 1876 repeats the statement regarding the necessity for absolute purity, his observations having been made on a specimen of glycerine which spontaneously crystallised in January of that year (*C. J.*, 1876, I., 651). He observed that when the crystals were melted, and afterwards a small crystal of glycerine dropped in, crystallisation took place at  $30^{\circ}\text{F}$ . ( $-1^{\circ}\text{C}$ ), and without the crystal at  $24^{\circ}\text{F}$ . ( $-4.5^{\circ}\text{C}$ ). The crystals which were monoclinic melted at  $60^{\circ}\text{F}$ . ( $15.5^{\circ}\text{C}$ ), the liquid being sp. gr. 1.261. These observations seem to us to lack accuracy, and are generally inconsistent with others. Again, in 1885, Mr. Wallace Procter, of Philadelphia (*A. J. P.*, 1885, 273), noted that when the crystals are completely melted, solidification does not again occur with ordinary refrigeration. The melting-point of the crystals, roughly estimated, he found to be between  $21^{\circ}\text{C}$ . and  $28^{\circ}\text{C}$ ., while its sp. gr. was 1.2618, and that of the mother liquor 1.235 to 1.237. Dr. F. Peckel Möller states (*Law of Atomic Linking*, page 78) that "it requires a temperature below  $-40^{\circ}$  to solidify glycerin under ordinary circumstances; but the crystals, once formed, melt at  $17^{\circ}$  to  $20^{\circ}$ . Under certain circumstances, not exactly known (*e.g.*, during transport) glycerin does not require so low a temperature to solidify." We imagine it probable that crystals of other substances, but of the same series, may cause the glycerine to crystallise. We have already remarked that our specimen contains more than a trace of a sulphate, which, during the frost, may have crystallised first, either alone or with glycerine (as glycerine of crystallisation, so to speak); then this may act as the nucleus for solid glycerine.

It is obvious from these varied observations that our knowledge of crystallised glycerine is still in an amorphous state; but an opportunity is now presented for working the matter out thoroughly, and this Mr. Bevan is attempting to do. We have had the opportunity of inspecting several crops

of crystals which he is growing at a temperature of  $14^{\circ}\text{C}$ ., some of which he proposes to exhibit at the Royal Institution this evening (Friday). Mr. Bevan is using ordinary 1260 glycerine for crystallisation, the Horsham crystals affording the nuclei. One jar, which had been liberally sprinkled with nucleo-crystals, showed a week ago a fine crop of transparent crystals all round the bottom and sides of the jar. The crystals closely resembled those of Liebreich's chloral hydrate in appearance as well as in size. In another jar Mr. Bevan has grown a single crystal by suspending a tiny nucleus upon a platinum-wire loop. On Friday last this had grown to a length of fully half an inch, and would weigh between 2 and 3 grammes. Mr. Bevan pointed out that in the first stage of crystallisation the glycerine assumes the form of minute needles, which are visible only because they glisten; as these grow they settle and increase rapidly. Sudden solidification has not been observed, that only being possible when the temperature is sufficiently low. So far Mr. Bevan has been aiming to see what happens at the normal temperature, and to obtain some very large crystals. The needle-crystals referred to are particularly noticeable in a specimen of the glycerine which Mr. Bevan is keeping in a cellar (temperature  $55^{\circ}\text{C}$ ). The liquid in this case is heavily charged with them, and we observed a snowlike nimbus and streaks of minute white crystals throughout the jar, and it is quite possible that at  $0^{\circ}\text{C}$ . the whole mass would suddenly become solid, so many crystallisation-points are there throughout it. Mr. Bevan's former experiments confirm what Dr. Möller says as to the temperature which glycerine can stand without crystallising. He has exposed it to a mixture of solid carbonic acid and ether ( $= -100^{\circ}\text{C}$ ), and there was no sign of crystallisation. While all these observations show nothing inconsistent with the general laws of crystallisation, they yet exhibit an unusual interest, and one which pharmacists will appreciate more than other chemists. It is to be hoped, therefore, that Mr. Bevan will succeed in removing confusion from existing records, and formulating new data regarding the crystals of glycerine. Perhaps the Royal Institution chemists may be able to assist him by exactly determining with liquid oxygen at what temperature glycerine *per se* crystallises, then by similar means assist in the physical experiments which are required to exactly determine the place which glycerine has in the world of crystals.

#### LIQUEFACTION OF HYDROGEN.

Professor Olszewski, of Cracow, has informed Professor Ramsay that he has at last succeeded in determining the critical temperature and the boiling-point of hydrogen. He has found for the former  $-233^{\circ}$  and for the latter  $-243^{\circ}$ . This brief statement naturally means that the Cracow professor has liquefied hydrogen. In September, last year, Professor Dewar was within measurable distance of that achievement (see *C. & D.*, xlv., p. 376). Indeed it is quite possible that he actually obtained it, but he was not able to handle it long enough to learn much about it, far less the important constants which Olszewski has now determined.

#### PHARMACOPEIA REVISION.

So much of our space this week is devoted to Pharmacopœia criticism that we cannot venture to comment upon some statements printed with which we do not agree. For the same reason we are compelled to merely mention the fact that Professor Reynolds Green, of the Pharmaceutical Society, has communicated an important article on the botany of the Pharmacopœia to the last issue of the *British Medical Journal*. Generally speaking, Professor Green roundly condemns this section of the Pharmacopœia, for, while he allows that many advances have been made in botany since 1885,



his criticism largely relates to matters on which there could be no advance, for nature has fixed the characteristics of seeds, fruits, &c., the official descriptions of which Professor Green condemns. The Professor, however, suggests several new features which would help to identify more clearly vegetable *materia medica* and to exclude the adulterants associated with drugs. He argues in favour of the introduction of macroscopic and microscopic characters, and would even add, where necessary, proper drawings to assist identification. This is one of the subjects which our investigator has in hand for our own series.

#### PHENOL FOR INFLUENZA.

The drug-trade of Oldham has been stirred up during the past fortnight in consequence of a paragraph which appeared in the *Lancet* condemning the action of the Rev. J. E. Woodrow, of Ormskirk, in prescribing a preparation of carbolic acid for influenza. From the medical point of view the *Lancet* assured him that he "incurred a considerable responsibility in advising such remedies or any other for a disease so serious in itself, and lowers his office and his influence by such interference with the functions of another profession." This gratuitous piece of advice appears to have met with the Oldham *Standard's* approval, for on Monday it warned its readers against the prescription, and gave some quaint information. Thus we are told that "in the stomach carbolic acid is converted into a sulpho-carbonate, and, unless poisonous doses be given, it is so diluted by the gastric contents that it loses its antizymotic power. Medicinal doses have no effect." Dr. W. A. Stewart, a local practitioner, next day informed the *Standard* that he had one case of carbolic poisoning due to the medicine; but against that there is the statement by Mr. James Hurst, chemist and druggist, who says he has "dispensed the prescription for more than one thousand times since March 15 to March 23, and had nothing but gratifying reports of its results from all parts of the town." What a nice thing Mr. Hurst must have made of it during these eight days!

#### Student-studies.

##### V.

THE Poor Student is a quiet fellow, and, at the first glance, cuts a sorry figure beside such shining lights as the Conceited Student. As a rule he is meanly dressed, his trousers are short at the ankles and baggy at the knees.



He wears his coat buttoned to conceal the fact that he has no watchchain, and when you ask him the time he does not refer ostentatiously to a gold hunter which has stopped, as does the Fast Student, but glances quickly at the laboratory timepiece and tells you. He seems to have only one tie, and that is of a neutral tint and frayed where his turned-down collar rubs against it. He never protests when noisy fun is afoot, but neither does he take part in it. His broad back is always bent patiently over his work or his notebook, and he hands in his reports quickly. As soon as

the business of the day is over, he walks quietly off to his part-time employment.

His manners are unassuming and gentlemanly, clad, as it were, in homespun, and he will be a faithful, lifelong friend to a worthy and kindred spirit. He is an eloquent listener: like a sponge will he absorb the flowing wisdom of the Conceited Student; but there is a quiet glint about his eye as he listens. His feet are large enough and his hands red enough to be indecent; but these things do not trouble him, and he will make headway in the world in spite of them. Few among his fellows appreciate him at his true worth: the demonstrators have had their eyes upon him from the first, but the common ruck of workers and idlers have not gauged their man. They see only his apparent meanness, and when they do him the honour of thinking or speaking of him at all, dismiss him lightly as a "sap" and a wet blanket. Although during the round of day-to-day work he has taken his place quietly at the round table, the end of the session and the college and Square examinations will prove him the Arthur who, rising head and shoulders above his fellows, will square the circle.

Although he really lacks a great development of the bump of humour, he has, notwithstanding, a reputation for dry epigram. That is because he speaks the truth, and truth is so rarely spoken that it falls strangely on the ear and passes for wit. He is probably paying his college expenses out of the few pounds he scraped together during his assistantship, and somehow he manages to remit slight sums, saved from his salary for evening work, to his mother and sisters, who are having a hard time of it in some northern manufacturing town.

He perseveres in his studies silently to the end, sweeps the medals of his session, and passes triumphantly through the Square ordeal. He obtains a position in a manufacturing laboratory, where his ability soon procures him recognition and gains him promotion. Probably he makes a discovery, is shrewd enough to protect himself against exploitation by capitalist sharks, and makes a good thing of it, whereby that mother of his ceases to have a hard time of it in the northern manufacturing town, and lives in comfort for the rest of her days.

#### Trade Notes.

MESSRS. PILCAR FRÈRES, of Grasse, have established a London agency for their products, under the management of Mr. Horace Barrett, at 47 Mark Lane, E.C.

THE proprietors of the celebrated Rypona remedies have just sent out a large consignment of the ointment to the Japanese Government for use with the field hospitals at the seat of war.

A NEW edition of Messrs. R. Hovenden & Sons' illustrated catalogue, filling 390 octavo pages has just been issued. Besides patent medicines, perfumery, combs, brushes, &c., this catalogue prices multitudes of fancy goods a little outside the general range of a chemist's business, but concerning which information is occasionally required.

IT will have been noticed from an announcement made last week that Messrs. Snowdon, Sons & Co., of Millwall, E., have their petroleum jelly regularly tested by Dr. Samuel Rideal, F.I.C., so as to ensure the quality being maintained. We understand that the firm have recently put down additional plant for manufacturing the article, which, as we have previously stated, is not an artificial mixture of solid and liquid paraffins, but a purified natural petroleum jelly.

MESSRS. WILLIAM EDWARDS & SON, 157 Queen Victoria Street, E.C., have just published the 1895 edition of their catalogue. The first part comprises British and foreign proprietary medicines, mineral waters and perfumery, and the second druggists' sundries. It is well arranged and illustrated. We notice that the firm have been appointed agents for Messrs. Fletcher, Fletcher & Co.'s liquors, &c., and they also carry stock of Stevenson's copaiba and pepsin liquors.



## Constructive Criticism of the British Pharmacopœia.

## III.—NEW ORGANIC REMEDIES.

By H. HELBING,

*Author of "Modern Materia Medica."*

WHEN, in 1885, a new edition of the British Pharmacopœia was published, no one anticipated that the two or three synthetical preparations it contained, of which chloral hydrate and salicylic acid were typical, would, in the comparatively brief space of a few years, become legion, and form quite a Pharmacopœia in themselves. The enormous progress made in the knowledge of organic chemistry has been contemporaneous with the production of a number of preparations, mostly synthetically prepared and all active principles of constant composition and uniform action, some of which it was impossible for the compilers of the B.P. addendum to overlook in 1890.

Thus amongst the additions we observe acetanilide, adeps lanæ, gluside, homatropine hydrobromate, paraldehyde, phenacetin, phenazone, and sulphonol. The introduction of these eight compounds into the Pharmacopœia shows what a prominent part these new remedies play as therapeutical agents, and indicates also that in any future Pharmacopœia the question of further recognition of this class of remedies must receive serious consideration. In introducing them it is necessary that the authorities rigidly define the pharmacopœial requirements and state the characters and tests in as perfect and unmistakable a manner as possible.

In the Pharmacopœia of 1885, as well as in the Addendum, the descriptions often leave much to be desired, and inconsistencies are particularly noticeable which by careful comparison and revision might be easily avoided, and be to the greatest advantage.

## WHAT POINTS

have now to be taken into consideration in formulating the respective monographs on "new organic remedies"? In this term I include all organic compounds which are not contained, as such, in the crude material, but which undergo chemical treatment or, are prepared entirely by synthesis. By so doing I avoid the use of the title synthetic remedies, and thus include a number of compounds known as new remedies, which are not synthetically prepared in the strict sense of the word.

## WHICH NEW ORGANIC REMEDIES SHALL FIND A PLACE IN THE PHARMACOPŒIA?

To select from amongst the great number of new remedies those which should be included in the Pharmacopœia is by no means an easy task. Only those which have been in use for a length of time and have been found successful and reliable in physiological and therapeutical action should be introduced. Although the fact that a remedy is often prescribed necessarily attracts much attention to it, such preparations should also be included concerning which there exists a considerable amount of therapeutic evidence of a favourable character, and which it is not improbable will be extensively used as remedies shortly after the appearance of the Pharmacopœia.

From my own observations, and closely following the physiological and therapeutical literature of this country, the Continent, and the United States, I should like to see,

amongst others, the following new remedies (some of which are already in the 1890 Addendum) contained in a future edition of the Pharmacopœia:—

|                          |             |
|--------------------------|-------------|
| Acetanilide              | Naphthol    |
| Antipyrin                | Paraldehyde |
| Aristol                  | Phenacetin  |
| Chloralamide             | Phenocoll   |
| Dermatol                 | Piperazine  |
| Formic aldehyde          | Resorcin    |
| Guaiaacol                | Saccharin   |
| Homatropine hydrobromide | Salipyrine  |
| Ichthyol                 | Salol       |
| Lanoline                 | Sulphonol   |
| Naphthalene              | Trional     |

Without entering into details it may be remarked that by formic aldehyde a 40-per-cent. aqueous solution is intended, by guaiacol crystalline guaiacol, by ichthyol the ammonium salt, and by phenocoll the hydrochloride.

## NOMENCLATURE.

The plan of introducing a new remedy into pharmacopœial usage under its chemical name has been adopted in the Supplement to the French Codex, and is certainly the only measure which is strictly correct. On the other hand, for practical purposes it is hardly possible to expect either prescriber or dispenser to speak of phenyl-dimethyl-pyrazolon, or of benzoyl-sulphonic-imide, or of diethylsulphon-methyl-ethylmethane, particularly if we remember that there are hundreds of other new remedies, mostly synthetical, which the medical man comes across. To him, and to all those who have not a complete knowledge of the latest advances in organic chemistry, these names mean nothing whatever, and are less enlightening than the fancy name, or perhaps more correctly "trade" name, under which a preparation is known.

The name under which a remedy is described in therapeutical literature should on rational grounds be adopted as the principal title by the Pharmacopœia, and the chemical nomenclature, with the constitutional formula, given under the synonyms. To coin names like phenazone and adeps lanæ in order to try to avoid names which are trade-marks or under patent-protection is incorrect for several reasons, viz:—The class of remedies under consideration chiefly originate in and are almost exclusively the result of German chemical skill and manufacturing enterprise. A remedy does not find its way into this country until a great amount of physiological and therapeutical experience with it has been gained on the Continent. Whilst on the Continent no one hesitates to describe a remedy in therapeutical literature under the name given it by the inventor, it is not just that in Great Britain everything is admitted and everything is adopted in relation to the remedy with the exception of the original name, with the notion of giving English manufacturers a chance of competing and not being barred by a trade-mark. That such procedure is of no avail is seen in many instances. Whilst in the case of acetanilide, where no patent exists, the trade-marked name of "antifebrin" did not prevent the adoption and use of acetanilide of different manufacturers long before the publication of the B.P. Addendum, on the other hand, the lanoline lawsuit has shown that the re-naming of



lanoline "adeps lanæ," and admitting in a footnote to adeps lanæ hydrosus that "hydrous wool-fat is commonly known as 'lanoline,' which is a registered trade-mark in the United Kingdom," does not help the pharmacopœial authorities.

Therefore, let us have the name under which a preparation is known in international literature, and in all cases define this name, wherever possible, according to the chemical constitution and by the structural formula accepted by the Chemical Society, and not leave out, as in the case of phenacetin, the chemical synonym, and merely give the empirical formula. That a trade-marked name or an article, which is the subject of letters-patent has an equal right to be introduced into the Pharmacopœia cannot be doubted, for if such a product is largely prescribed it is the duty of the pharmacopœial authorities to include it in their work. This insertion must not be regarded as a mere act of official recognition, which is always erroneously assumed to be the most important point, but as a public safeguard; for because neither pharmacopœial authorities nor private individuals other than the patentee and his licensees can manufacture such an article, it is all the more the duty, and only the duty, of the pharmacopœial authorities to define such a preparation and give such characters and tests for its composition and purity as will be a check and control over the manufacturer. This is the primary object and scope of a Pharmacopœia.

#### METHOD OF MANUFACTURE.

To say that phenacetin is "a crystalline substance produced by the action of glacial acetic acid on para-phenetidine, a body obtained from phenol," and to expect that any pharmacist and dispenser could from this compound his own preparation, is surely not the intention of the pharmacopœial authorities. As much as it is necessary to indicate the exact method by which a tincture should be prepared, such meagre descriptions of manufacturing processes for remedies which form the subject of these lines are absolutely valueless. Not only are the true manufacturing processes frequently not known, and even patent specifications merely a sort of blind, but it is well known to the initiated that the technical difficulties to be overcome in the manufacture of some of these new remedies are very great, and that without the knowledge of the "manufacturing tricks," as they are termed in technical circles, not a grain of the synthetical product would be obtained.

But, if so, why then retain a skeleton description of a hypothetical manufacturing process? It has been over and over again asserted in authoritative quarters that the official Pharmacopœia is not intended as a book of instruction; and either as guides to the preparation of products corresponding to the superscriptions and answering to the physical and chemical tests given, or as aids in the recognition of the remedies, such an interpellation as that above quoted is mere shallow phraseology, without significance or value.

#### CHARACTERS AND TESTS.

This is the chapter in which the real importance and responsibility of the pharmacopœial authorities come in. Only one ruling idea can here guide the compiler, and I should like to lay stress upon it—viz., to define the preparation so exactly that the description will only apply to the substance identified by the chemical nomenclature and constitutional formula given; or in the case of lanoline and ichthyol to assign as exact qualifications as possible to the less exact terms "purified cholesteroline-fat of sheep's wool" and ichthyolsulphonate of ammonium. It is at this point that the description generally fails, for tests are given which, whilst excluding a certain number of adulterations, do not

guarantee that an article is identical in composition with that expressed by its chemical name and formula.

To define a preparation it is not only necessary to give reactions for its identification, but also, when possible, to give its melting and boiling points. It would be important that the Pharmacopœia should give in the introductory remarks an exact method for the determination of both melting and boiling points. The figures given in the Pharmacopœia must be the results of actual and repeated experiments undertaken for this specific purpose; for nothing can be more misleading than physical constants copied from papers, books, or even other Pharmacopœias, because very often soon after the first publication on a preparation improved manufacture produces a purer article, so that the factors given in the first publication require amendment.

Careful fractional distillation and fractional crystallisation can alone determine these points, which are of greatest importance in excluding preparations liable to give rise to secondary effects upon the system.

The tests given must also be precise; they must give the exact quantities and concentrations in which they have to be carried out, and the strength of the test-solutions must be stated. Qualified statements, such as "about," "nearly," &c., should be avoided; and when directed "to heat," the water-bath or a free flame should be specified, as well as the number of minutes, as in bodies so complicated as many of these preparations are, the slightest deviation frequently destroys the value of the test.

#### DOSAGE.

It is desirable that doses in the Pharmacopœia should be stated as single dose, daily dose, and as maximum dose, the last being the dose which must not be exceeded by the prescriber without appending an exclamation mark (!). This rule works well on the Continent, and I do not see why it should not be as successful in England if the General Medical Council once introduced it into the British Pharmacopœia.

If the points which I have noted are fully considered and strictly adhered to in respect to new organic compounds, there is no doubt that in the Pharmacopœia a guarantee will be given to the physician that the preparations prescribed are always of uniform action, and free from any secondary effects.

### Deaths.

ALLOTT.—On Sunday, February 24, at the Victoria Hospital, Jubbulpore, Central India, Mr. Gilbert H. N. Allott. Mr. Allott, who was about 33 years of age, came out to India about seven years ago as an assistant to Messrs. Smith, Stanistreet & Co., Calcutta, and had completed two years of this engagement when consumptive tendencies manifested themselves, and he was advised not to stay in India during the rainy season. He readily obtained an appointment as representative in India of several leading London houses, including Fletcher, Fletcher & Stevenson, Blondeville & Co., G. B. Kent & Sons, and latterly of Horner & Sons, and in that capacity visited India each cold season, avoiding alike the rigours of the English winter, and the equally exacting Indian summer. He some time ago relinquished the "Vinolia" agency for India in favour of Mr. Percy M. Roberts, whose death was recorded in THE CHEMIST AND DRUGGIST some weeks since, and Mr. Allott had just been reappointed to that agency. The immediate cause of death was the bursting of a blood-vessel during a violent fit of coughing while in the train between Bombay and Calcutta. A representative of Smith, Stanistreet & Co., Mr. Charles F. Baker, was present at the end, Mr. Charles W. White (representative of Burgoyne, Burdidges & Co., and Burroughs, Wellcome & Co., in India) and Mr. J. Bristed, of Kemp & Co.,



Bombay, arriving later. Mr. Allott was a good business man and a thoroughly gentlemanly fellow, well known and well liked by the members of the trade on both sides of India.

**BEARD**.—On March 23, at All Saints Street, Norwich, Annie Sarah, the beloved wife of Albert E. Beard, pharmaceutical chemist, in her 23rd year.

**BOYD**.—On March 23, Mr. George Boyd, principal of the firm of Messrs. J. & G. Boyd, wholesale druggists, Limerick, after a brief illness. The deceased was in his 76th year, and up to the period of his illness, some three weeks ago, he took an active part in the business of the concern.

**BRUCE**.—At 3 Grosvenor Terrace, Dundee, on March 19, William Keiller Bruce, chemist and druggist. Aged 49 years. Mr. Bruce was a stepson of Mr. Alexander Govan, pharmaceutical chemist, St. Andrews (one of the founders of the North British Branch), with whose firm he served his apprenticeship, passing the modified examination when it was instituted. Shortly afterwards he went to Dundee to take a share in the management of James Keiller & Son's confectionery and marmalade business, and ultimately became a partner.

**HOOPER**.—The death is reported of Mr. Charles Edward Hooper, one of the best known druggists of Toronto. Mr. Hooper was born at Kensington 63 years ago, and when a young man went out to Canada, where his uncle, Mr. Edward Hooper was in business as a druggist. With him he was apprenticed and ultimately became a partner. The senior (still alive and hearty at 87) retired ten years ago, and the deceased also retired in 1893.

**HURMAN**.—On March 19, at 13 Osborne Avenue, Newcastle-on-Tyne, John Hurman, chemist and druggist, and partner in the firm of Mawson, Swan & Co. Aged 75. Mr. Hurman went to Newcastle from Bridgwater about twenty-five years ago to join the firm above named. He was a member of the Society of Friends, and an ardent temperance reformer. Mr. Hurman leaves a widow and grown-up family.

**MARSH**.—On March 19, Mr. William Marns Marsh, who was for many years in business as a chemist and druggist in High Street, Sevenoaks, in the premises now occupied by Mr. E. Pain. He was 81 years of age, and had retired from commercial life for twenty years.

**PRIDGEON**.—On March 20, Mr. W. J. Pridgeon, chemist and druggist, The Moor, Hawkhurst, Kent. Aged 57 years.

**SARG**.—Mr. Carl Sarg, whose name is prominently associated with the continental soap, candle, and glycerine industry, died at his home in Vienna on March 14, in his 64th year. Mr. Sarg was the head of the firm of F. A. Sarg's Sohn & Co., and a member of the directorate of several industrial undertakings, such as banks, mining-companies, and breweries.

**SPENCER**.—On March 21, at The Terrace, Roker, Phillips Spencer, chemist and druggist, of Low Friar Street, Newcastle-on-Tyne. Aged 87. Mr. Spencer for a number of years carried on a wholesale business in Low Friar Street, and was well known throughout the Northern counties. A short time ago he retired from business in favour of his manager.

**THRESHER**.—On March 19, at Acton, Mr. George Thresher, from bronchitis, in his 68th year. Mr. Thresher for nearly thirty years represented Messrs. T. & W. Jones, oil merchants, of Southwark, and retired about thirteen years ago, when that firm gave up business. He was a racy and original talker, full of information, and will be remembered by many of the older druggists in the Eastern counties. During his retirement he gave his time quietly and unobtrusively to various schemes for the welfare of the working classes.

**THYER**.—On March 18, Mr. James Thyer, chemist and druggist, 42 Chariot Street, Hull. Mr. Thyer was a great cripple, and walking was a most difficult and tedious process to him. He had a special tricycle constructed for him working by hand-levers, and on this he was frequently to be seen on his way to business. Previous to taking the shop in Chariot Street, he was for many years dispenser to the Hull Royal Infirmary.

## Personalities.

THE portrait of Lord Rayleigh which we printed last week was from a photograph by Messrs. Maule & Fox, 187A Piccadilly, London, W.

DR. WALTER H. INCE left London on Wednesday for Port of Spain, to take up his duties as assistant Government analyst for Trinidad.

THE Senatus of the Edinburgh University are to confer the honorary degree of LL.D. upon Dr. Thomas E. Thorpe, F.R.S., director of the Somerset House laboratories.

G. W. STEPHENSON, a son of Mr. R. Stephenson, chemist, Bradford, distinguished himself at the College of Preceptors' medical examination the other day, taking 700 marks, or 290 above the "pass."

MR. ARTHUR W. HILL, who is a son-in-law of the late Mr. Thomas Clark, whose death we announced in our last issue, asks us to state that that gentleman is survived by six daughters and his second wife, as well as by one son.

MR. BENNET H. BROUGH, about whom kind things were said at the Chemical Society's meeting on Wednesday, and who was elected a member of the Council, is a son of the late John Cargill Brough, who for some years was editor of this journal. Mr. Brough is a distinguished metallurgist, and is Secretary to the Iron and Steel Institute.

MR. HENRY DUNN, Pharmaceutical Chemist, and Local Secretary of the Pharmaceutical Society at Shipley, has been re-elected as the representative of Shipley on the West Riding County Council. At the first meeting of the new council, held on March 13, Mr. Dunn was elected to the position of County Alderman. He is also Vice-Chairman of the Shipley Urban District Council.

THERE is at present exhibiting in Savile Street, Hull, a portrait-group of the members of the Hull Board of Guardians after their last meeting in December, 1894, which closed the old order of things. The interest of the picture to chemists lies in the fact that the central portrait is a faithful representation of Mr. C. B. Bell, chemist, in all the glory of the governor's chain and insignia of office. Mr. Bell is the local secretary of the Pharmaceutical Society.

DR. AUGUSTUS VERNON HARCOURT, the new President of the Chemical Society, is a son of the famous admiral, and a son-in-law of the late Lord Aberdare. He is Lees Reader in the University of Oxford, and, in conjunction with Mr. Madan, has written a text-book in practical chemistry. He has been a Fellow of the Society since 1859. His home at Cowley Grange is a notable social centre in 'varsity life, and when not there he is often to be found at his castle known as St. Clare, overlooking the Solent. Dr. Harcourt's "opinion" is much sought after by executive bodies in regard to such matters as water-supply.

MR. WILLIAM HOLLIS, formerly a chemist and druggist at Stoke-on-Trent, who was convicted at the Stafford Assizes in November, 1882, on a charge of performing an illegal operation on a woman, and thereby causing her death, and was then sentenced to death, the capital punishment being afterwards commuted to penal servitude for life, has lately been released by order of the Home Secretary. Mr. Hollis is now far advanced in years, and in a precarious state of health, and has an aged and infirm wife and two daughters dependent on him. He is anxious to go into business again, and says he should do so with good prospects of success, but he appeals to the trade and others for assistance. It should be stated that, previous to the conviction in 1882, he had undergone a long term of imprisonment for a somewhat similar offence, and that in his published circular he states these circumstances candidly enough, but gives versions of his conduct which we suppose were submitted to, but rejected by, the juries who tried the cases. We neither support nor encourage Mr. Hollis's unique appeal; but we cannot help hoping that a man who has undergone such terrible experiences may not find it impossible, in the evening of his life, to recover to some extent a respectable position. Mr. Hollis's address is 2 Steel Street, Hartshill, Stoke-on-Trent.



## Argon:

## FROM THE AMERICAN POINT OF VIEW.

WHEN we see an American newspaper heading which, even when paraphrased, strikes us as original, we expect that the article appended to it will make good reading. Nor were we disappointed when we read in the *New York World* this paragraph:—

ARGON UPSETS THE CHEMISTS. The New Element in the Atmosphere a Strange Revelation. A cubic inch would cost \$20,000. Its Existence in the Air was Suspected, and now, when Condensed, it Looks Like Cheese.

"And is not disagreeable to the taste," we find it stated later on. Well, neither is the article, so we print most of it, especially as this is argon week.

European scientists of distinction, says the writer, have discovered that we have been breathing a substance into our lungs whose existence was not hitherto suspected, and that the standard works on chemistry are now no good, inasmuch as they lay down infallible rules which argon, the new gas, sets at defiance.

Argon refuses to harmonise with the established principles of chemical action. It has already demolished several well-rounded reputations. It has upset "the periodic law," which was the great discovery of Mendeleeff (*sic*), and for generations has been accepted by every young chemist as the beginning of the beginning, the bed-rock of truth upon which all subsequent theorising had to be founded.

The periodic law is now in a badly shattered condition, for Mendeleeff, when he made it, failed to think of argon, then unknown. His elaborate tables will now be looked upon with suspicion, in view of the fact that argon, with an atomic weight of 40, appears to be a law unto itself. Its molecules are monatomic, and that being the case, the chemical writers will have to begin all over again.

The scientists had thought that they knew all about the air. Professors of learned mien had resolved it into its original elements, and dogmatized thereon to classes of awestricken students. It is true that one or two scientists in days gone by had come across some suspicious facts in such experimentalising, and had told the dogmatic professors to go slowly and not to be so dead sure in their statements.

Theoretically, and according to the rules, this ought not to be. The artificial and the natural nitrogen would, if the "laws" were all right, be exactly alike.

## ONE EXPLANATION.

At this the scientists were sorely puzzled. It is true that the difference was only slight. But scientists, like Mendeleeff, in a hurry to make "laws" which would explain everything and be of universal application, thereupon invented a theory which would dispose of this awkward obstacle. They said that the discrepancy in weights was "due to contamination with impurities consisting of known substances," and they let it go at that without specifying what these "known substances" were. As a matter of fact it was argon which was responsible for the trouble.

But only a few suspected what was the matter. They were the conservatives, and were in a great minority. The young and ambitious men in chemistry called them a lot of croakers, and have now been covered with confusion by the suspicious, non-committal analysts who are rushing into print to say that they knew it all along.

## RIVAL CLAIMANTS.

Indeed, the discovery of argon has been followed by a controversy such as the chemical world has never before witnessed. Already the little band of men who spend their time between the laboratory and the calculating table, and whose minds are often so filled with infinite problems that they forget their dinner, are divided into schools, each claiming that some one man is the Columbus of the science who has given to the world argon, the great unknown.

There are those who claim that Professor Dewar, of the Royal Institution, found it; others maintain that Lord Rayleigh is the real discoverer; and still others assert that Professor Ramsay and Professor Olszewski, of Cracow, are entitled to the honour. [The *World* man becomes a little

mixed here, but no matter.—ED.] As to those who are writing to the scientific journals, saying they "knew it all along," and giving elaborate extracts from their notebooks to show that they suspected something was wrong with the periodic law, their name is legion.

## WHAT ARGON IS.

Just what is argon? What use is it? What does it look like? These are questions which a rapidly increasing multitude of people are asking themselves as the fight in the chemical world becomes hotter and hotter.

The decomposition of air, and the liquefaction of gases, are two of the first things the young chemist tries his hand upon. Chemists have been decomposing the air for centuries. It is one of their favourite experiments to reach up and, taking a large piece of air, resolve it into its original elements. That always makes the uninitiated stare.

The only wonder now is that argon was not long ago discovered, and that chemists have so long succeeded in humbugging people into believing that they know all about the atmosphere. Even while they were speaking so authoritatively about different atmospheric properties, there was argon all about them, and they breathed it into their lungs in large quantities without knowing it. Their finely perfected theories about the simple elements of atmosphere are now all knocked into a cocked hat, and they have themselves brought an elaborate fabric of "laws" and "principles" tumbling about their ears.

The new discovery has shaken faith in chemistry to its foundations. It is not unlikely, being thrown back upon original investigation, divesting themselves of dogmatic hauteur, and approaching the subject in an humble inquiring spirit, that elements even more startling than argon may be discovered in the near future by the chemists.

## MAY BE OTHER CLAIMANTS.

Nobody now is sure what the air is made of. If argon was in the air in millions of tons, being drawn into men's lungs, rubbing itself against their faces, entering their houses, and even disturbing their tables of statistics in a vain effort to call attention to itself for these hundreds of years, who knows what else there may be in air?

One cannot blame the ancients for not having discovered argon. The ancients, with all their learning and eloquence, their achievements in the plastic arts, and their fine-drawn philosophies, were distinctly "not in it" when it comes to science. They had no Lick telescopes, no steam-engines, no telephones or bicycles, and their knowledge of chemistry was of the most rudimentary character. This is shown as much by what they ate for dinner as by the rude and even grotesque attempts they made to decoct liquids and mix various kinds of drinks. But when modern chemistry, with its long list of great names, its glorious achievements in the past, its marvellous demonstrations of truth, "falls down" on such a simple thing as air, what are people to think?

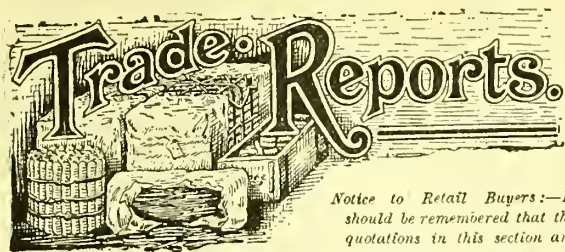
## A COSTLY SUBSTANCE

One thing is thus far known—viz., that a cubic inch of argon would cost \$20,000. It is thus not within the reach of all save in its original shape, when, it is believed, if we were deprived of it we would instantly die. In the air, where it belongs, argon is within the reach of the poorest, and the beggar can use as much of it as the millionaire, but to secure a small piece of it in the concentrated form in which it was shown at the meeting of the Royal Society of England would cost much money here.

That, however, is only because the machinery necessary to liquefy argon is very expensive. Professor Ogden Doremus explains that a machine to condense argon would cost \$20,000, and as there is no such machine in America the substance in its concentrated form had not yet been seen here.

Such a machine could go on concentrating argon at a slight cost, and, having once been concentrated, it could be put up in small packages or in boxes which could be carried in the pocket. With the other constituents of air similarly condensed no man need fear being deprived of air, as he could bite off pieces of oxygen and hydrogen (*sic*) and polish off the whole with a nibble of argon. In colour it is white, and its consistency is not unlike that of cheese, while it is not disagreeable to the taste.





Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large

quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

#### 42 CANNON STREET, E.C., March 28.

It seems that there has been some slight, perhaps we might say almost imperceptible, improvement in business since we last commented upon the state of the drug-trade; but in spite of the more cheerful anticipations entertained in some quarters, there is still a good deal of grumbling. The year is now fairly well advanced, and if there were any prospect of a good summer trade, it ought, by this time, to have shown itself. Singularly enough, retail chemists all over the country have been exceptionally busy during the last four or six weeks, and there can be little doubt that the consumption of medicines all over Europe has this spring been much in excess of the average.

The principal movements in the Mincing Lane drug-market may be summed up as follows:—Chinese drugs, and to a slighter extent Japanese also, have advanced somewhat, partly in consequence of speculation connected with the war, and partly on account of the strong rise in the value of silver, which necessarily reacts upon all products from these countries. Crude camphor is much dearer, cassia and star-anise oils are firmer, while menthol and Japanese oil of peppermint are tending higher. In other drugs we have to report a steady trade at full prices in senna, cascara sagrada, cubebs, and insect-flowers; civet and scammony-root are also dearer. A small parcel of fine araroba has arrived, but is held for extreme prices. Oil of citronella, most of the Italian oils, and oil of neroli are dearer. Jalap is tending lower, and there has been a very large arrival of asafetida which may affect the market for that drug. Opium looks like breaking down, and the decline in this drug and its preparations which we foreshadowed now seems upon us. Cod-liver oil, in consequence of improved fishing results, is also decidedly lower. In fine chemicals the chief alteration is in caffeine, which is now scarcely to be had; there has also been a strong demand for salicin and salicylate of soda; quinine is steady, but seems hard to move; chlorate of potash is slightly firmer; in refined camphor a rise is imminent, while the scarcity of tartar materials has caused cream of tartar and tartaric acid to tend upwards. In "outside" articles there has been an advance in Chinese galls, and a somewhat improved market for alcohol. Quicksilver remains steady; shellac dull of sale; all tar-distillation products quiet, although pitch continues to be very dear. Spices are mostly dull, but black pepper and nutmegs are very firm. Zanzibar cloves quiet. In oils, petroleum is firmly held, but linseed, rape, and cotton-seed oils, as well as turpentine, are lower. The demand for gum olibanum has been much better, and prices have advanced; in acacia gum

the public sales to-day went off with more spirit, Aden gums being in strong demand at 5s. to 10s. advance, and Ghatti well competed for. The Bank-rate still remains 2 per cent. Bar silver has advanced to 29½d. per oz. The foreign exchanges are to-day:—Calcutta and Bombay, 1s. 1½d.; Shanghai (four months), 2s. 11d.; Hong-Kong (four months), 2s. 1d.; Rio, 9¾d.; Valparaiso, 16¾d.

#### Decline in the Smyrna Opium-market.

Our Smyrna correspondent, telegraphing on Wednesday night, reports that a sale of 260 cases of fair manufacturing opium has been made to agents for American houses, at the parity of 8s per lb, f.o.b., which shows a considerable decline, but that there are no further buyers at that figure. A further fall in prices is expected.

#### The Liverpool Drug-market.

Our correspondent, writing on March 27, says that in *Gums* there is no trade of any importance. They move slowly, and sellers do not show much desire to get on, as they offer buyers little or no encouragement to come at prices under late rates—this being specially the case with regard to *Soudan sorts*. In *Scammony root* further sales have been made at 30s. per cwt. for prime root. Although the sales of *Chilian anise* do not reach large proportions, the article continues to realise 23s. per cwt. readily enough when wanted. In *African ginger* a large business has been done during the week, and considerable parcels have been purchased for shipment; the values range from 23s to 25s per cwt. for good root. In *Beeswax* several parcels of *Californian* and *Chilian* have been offered at auction, but no business has resulted, as buyers' ideas are below those of sellers, but the latter shown no sign of giving way. *Quillain bark* is very firm at 12½ per ton, at which sales have been made, and some holders ask 12½ 10s per ton. Several parcels of *Kola-nuts* have been sold from the quay at prices ranging from 9½d. to 1s. per lb, according to quality. *Castor oil* has been selling steadily at 2d. per lb. for good seconds *Calcutta*, notwithstanding the close proximity of parcels afloat, and holders are very firm in their views. *French oil*, although not quotably higher, is very much firmer both on spot and forward. While no change has taken place in the quotations for *Touca-beans*, holders are very persistent in asserting that better prices will be ruling in the near future, and show no disposition to encourage buyers even at present rates.

#### The Projected Java Quinine-factory.

The prospectus of the "Java Quinine and Chemical Factory," which is to be built (capital forthcoming) at Bandung, in the centre of the principal cinchona-growing district of the island, has at last been published. The capital of the company is 1,000,000 florins (about 85,000 £), in 1,000 shares of 1,000 florins each. The object of the company is the manufacture and sale of quinine and other chemicals. The factory is expressly prohibited from entering into engagements or contracts of any kind with any other quinine-factory. All that is now required before the factory can commence operations is an undertaking on the part of the cinchona-growers to supply their output exclusively to it for a definite period.

#### The Amsterdam Market.

Our Amsterdam correspondent reports that the 6,009 packages of *Java cinchona* bark will be offered for public sale on April 4 contain the equivalent of 23,854 kilos. of *Sulphate of quinine*, which gives an average percentage of manufacturing bark of 4.91. The total weight of the bark to be offered is 494,477 kilos.

#### Liverpool Oil and Chemical-market.

Our correspondent writes under date of March 27:—"The chemical-market is quiet, but slightly more business is doing for export. *Acid—Oxalic* firmly held at 3¾d. per lb. *Ammonia—Sal ammoniac* in fair request, 39s for best and 37s. for seconds; *Sulphate*, quiet and lower at 11½ 5s. per ton, f.o.b.; *Carbonate*, no change. *Potashes*.—*Pot* and *Pearl*, no change; *Prussiate*, lower at 9½d. per lb; *Bichromate* keeps



steady at 4½d. per lb.; *Saltpetre*, idle at 24s. per cwt.; *Chlorate* keeps very quiet, and 4½d. is the price for spot, and 4½d. for forward delivery. *Soda—Caustic Ash*, steady at 3l. 15s. to 4l. per ton; *Caustic*: rather more business in this; prices are—7l. 15s. for 70-per-cent. and 6l. 15s. for 60-per-cent., net cash; *Crystals*, quiet at 2l. 10s. per ton; *Bicarbonate*, rather higher, 7l. per ton being asked; *Bichromate*, scarce at 3½d. per lb.; *Hyposulphite*, in greater demand at 6l. 12s. 6d. per ton; *Silicate*, 3l. 15s. per ton; *Nitrate*, in fair demand at 8s. 9d. per cwt. *Bleaching-powder*, quiet at 7l. 5s. per ton, f.o.b., net cash. *Copper sulphate*, dull, 15l. per ton. *Sulphur*, quiet at 5l. 10s. for roll, 7l. 10s. for flour. *Phosphorus*: sticks, 2s. 1d.; amorph., 2s. 8½d. The oil-trade continues firm, but there is a further decrease in supply, which strengthens the market, and values again are slightly on a higher basis. *Palm oil*: owing to the small arrivals prices remain firm, 29l. 10s. to 19l. per ton, according to quality. *Cottonseed oil* is steady at 17s. 6d. per cwt. *Cocanut oil*, flat at 23s. 6d. per cwt. *Linseed oil*, of Liverpool make, 21s.

#### The New York Drug-market.

Our New York correspondent writes under date of March 13 as follows:—"Since my last letter the market has presented few features of special interest. *Alcohol* is again disturbed, because of a readjustment which is going on within the Trust, and has been advanced to \$2.37 per gallon. *Caffeine* also has advanced, and small lots can be had at \$8.50, though the supply is very limited indeed. *Cocaine* has advanced, and is scarce on the spot at \$6.50. *Norwegian cod-liver oil* is quiet at \$38 to \$40. Late advices from Hamburg by cable give news of a decline from the very high prices ruling for some time past. As yet no positive decline has been scored in this market. *Opium* is quiet at \$2.20, the continued reports of unfavourable weather in the opium district having not caused any advance, though it has not checked any disposition to unload on the part of holders here. *Quinine* has sold quite briskly to consumers on the basis of 23c. cash. *Central American balsam copaiba* has stiffened up under an improved demand, and for a strictly pure article 36c. is asked. *Coca-leaves* have advanced to 22c. to 25c. for Truxillo, and 38c. to 40c. for Huanoco. *Kola nuts* are in brisk demand, and have advanced to 34c., with stocks reported quite light. An easier feeling is noted in the *Peppermint-oil* districts of New York State, and sales have been made of Wayne County bulk at \$1.75 laid down in this city."

**ACID (CARBOLIC).**—It is reported that a fair amount of business has been done in *Crystals*, for prompt delivery, at about 5½d. per lb. for 34° to 35° C.; it is still possible to buy at that price. For forward delivery, however, there is no demand at all; 39° to 40° crystals are held at 5½d. to 5¾d. *Crude acid*, 60-per-cent., at 1s. 5½d., and 75-per-cent. at 1s. 9d. per gallon.

**ACID (CITRIC).**—Firm, at unaltered prices: 1s. 1¾d. to 1s. 2d. per lb. on the spot.

**ACID (TARTARIC).**—English brands are held at from 10½d. to 11d. per lb., according to quality. Foreign acid sold a few days ago at 10d. per lb., and that price has since been refused, the lowest current quotation being from 10½d. to 10¾d. per lb.

**ALCOHOL.**—German *potato-spirit* is tending somewhat better in consequence of the proposals for Government restriction of the output of alcohol in Germany. Quotations have advanced about ½d. per gallon all round from the lowest point, and druggists' qualities are now quoted at 7½d. per gallon London terms.

**ARAROA.**—A small consignment of 5 cases has been received lately from South America. It shows very good quality, but is held for the somewhat extravagant price of 2s. 6d. per lb. There is also a supply in Hamburg, but most of this is of inferior quality.

**ASAFOETIDA.**—The dealers interested in this article were surprised to-day to notice in the import-lists the announcement of an arrival of 471 cases of asafoetida from the Persian Gulf. Such a large quantity as this, which presumably contains a fair proportion of good quality, will in all probability cause a decline in the market, especially if it

should consist of various consignments, and be placed in the hands of several brokers.

**BALSAM PERU** remains firm, at from 8s. to 8s. 3d. per lb. for good quality of direct import, according to holder.

**BENZOIN.**—A fair demand is said to have been shown since the last auctions for medium and ordinary *Sumatra* gum: fire white almondy seconds, very little false-packed, are reported to be selling in small quantities at 10l. 10s. to 10l. 15s. per cwt.

**CAFFEINE.**—It is difficult to make any quotation this week, as the makers will not sell for prompt or near delivery, and there appears to be hardly anything in second-hand. The last spot sales in London were at the rate of 17s. per lb. from second-hand owners, but we doubt whether anything more could be had at that price. A report from New York, dated March 18, says:—"The market is in a very peculiar position, the demand from the trade having outrun the available spot supply, and a 10-lb. lot has been sold at \$7.50 per lb. There are orders in the market for two or three hundred pounds, but the would-be purchasers cannot secure what they require."

**CAMPHOR (CRUDE).**—The principal article of interest in the drug-market this week has been raw camphor, which has rapidly advanced in all positions on the strength of alarmist reports from the East. The movement appears to be mainly speculative at present, and it is very much doubted whether it will be of long duration. The main reason given for the advance is the possibility that an annexation by Japan of the island of Formosa, which produces all—or nearly all—of the Chinese camphor, might induce the Japanese, who would then control practically the whole of the supply, to place an export-duty upon the drug. The following is a sketch of the business transacted (so far as is known) since our last report:—*China (Formosa)* camphor: Spot sales in second-hand at from 105s. up to 112s. 6d. per cwt. Holders now refuse to part with any more at the last-named price. The importers' lowest quotation is 115s. per cwt. For arrival business was done a few days ago at 102s. 6d. per cwt., c.i.f., near at hand, and since then at 110s. per cwt., c.i.f., March-May steamer, at which there are still sellers in second-hand. The importers ask about 125s. per cwt., c.i.f., for March-May steamer shipment. *Japan* camphor: Spot sales at 120s. per cwt., at which price there were further sellers on Wednesday. For shipment business has been done (second-hand) at 112s. 6d. to 115s., c.i.f., for March-May steamer, for which 120s., c.i.f., is now asked, and at 117s. 6d., c.i.f., for April-May steamer, for which 122s. 6d., c.i.f., is now asked. The importers require 130s., c.i.f., for the same position.

**CAMPHOR (REFINED)** is at present unaltered in price, although the position of raw camphor would warrant an advance of about 2d. per lb. There has been a good deal of discussion about the raising of the quotations between the English and the German manufacturers. Neither nationality will take the lead in announcing a rise, and a proposal made by the English makers to their German colleagues to advance the price 2d. per lb. does not appear to have been favourably received by the latter.

**CASCARA SAGRADA.**—On Saturday last 21 bales of good quality sold at the comparatively high price of 20s. per cwt. The last sales previous to this were at the rates of from 18s. to 18s. 6d. per cwt. It is said there is now very little left in San Francisco.

**CHLORATE OF POTASH** is now quoted at 4¾d. per lb., f.o.b., Liverpool, or 4¾d. per lb. in London, which is rather firmer.

**CREAM OF TARTAR.**—Firm, at 63s. to 63s. 6d. per cwt. for best white French *Crystals*, and 66s. per cwt. for *Powder*. The quotation for crystals from Bordeaux is 59s. per cwt., f.o.b.

**CINCHONA.**—The present stock of cinchona-bark in London consists of 31,639 bales, of which 13,582 are *East Indian* and *African bark*; 5,820, flat and quill *Calisaya*; 284, *Crown* and grey; 76, *South American* red; 804, *Curtagena*; and 11,123, soft *Colombian*; *Cuprea*, *New Granadian*, and *Pitayo*. The stock of bark on March 1 of last year was 36,764 bales, and on the same date of 1893, 41,735 bales. The following figures represent the shipments of cinchona-bark from Java



during each of the past five years (January 1 December 31):—

|                                    | 1890      | 1891      | 1892      | 1893      | 1894      |
|------------------------------------|-----------|-----------|-----------|-----------|-----------|
| Government plantations, Amst. lbs. | 518,884   | 742,760   | 538,846   | 519,238   | 651,851   |
| Private plantations, Amst. lbs.    | 6,109,423 | 7,165,927 | 5,968,745 | 6,913,556 | 8,236,744 |
| Total ..                           | 6,628,307 | 7,908,687 | 6,537,591 | 7,432,814 | 8,921,595 |

CIVET still advancing; a small sale of fine, genuine quality, has been made for export to France at 43s. per oz.

CUBES.—The improved inquiry which has lately been shown has been maintained since the last auctions; good quality from Singapore has been selling at 45s. per cwt., and the quotation is now from 45s. to 47s. 6d. per cwt. The exports from Java (the only country which produces the fruit in commercial quantities) during the last five years have been:—

| Year ..               | 1890  | 1891  | 1892  | 1893  | 1894  |
|-----------------------|-------|-------|-------|-------|-------|
| Piculs (of 133½ lbs.) | 1,373 | 1,838 | 2,307 | 3,244 | 4,634 |

GALLS (CHINESE).—In common with several other products from the Far East, *Chinese galls* have shown increased activity during the last eight or ten days. A fair business is reported, both on the spot and for arrival. In the former position 52s. 6d. per cwt. has been paid repeatedly; while for arrival several hundred cases have changed hands for March-May steamer shipment at 49s. 6d. to 50s. per cwt. "c.i.f." terms. There are now no further sellers even at the higher price.

GUM ACACIA.—Small sales of fine pale soft friable *Soudan* sorts have been made at 70s., and of hard glassy ditto at 57s. 6d. per cwt. There is at present no supply here of *Ghezirah* and *Talea* gums, which would realise fair prices if offered. So-called insoluble Persian gum is in large supply, but neglected save for pale, selected quality, which is quoted at from 20s. to 22s. per cwt.

GUM CHICLE.—Some sales have lately been made at 1s. 5d. per lb., for one bale lots, but the owners now refuse to sell any more below 1s. 6d. They say that the gum is getting introduced nicely into this country.

INSECT-FLOWERS.—Reports from Trieste mention that several American orders for insect-flowers have been placed there lately, and that in consequence the market has become rather firmer. The prices range at present from 50s. to 52s. 6d. for open, 65s. to 67s. 6d. for "half-open," and 105s. to 110s. per cwt. for "closed" flowers—all c.i.f. terms. The statistical position of insect-flowers in Trieste at the end of January was as follows:—

|                                           | Kilos.  |
|-------------------------------------------|---------|
| Stock of old flowers on June 1, 1893 ..   | 266,100 |
| Arrivals—June 1, 1894–January 31, 1895 .. | 497,000 |
|                                           | 763,100 |
| Sales—June 1, 1894–January 31, 1895 ..    | 421,200 |
| Stock on January 31, 1895 ..              | 341,900 |

JALAP.—Rather easier; about 70 bales have arrived in Liverpool. Good heavy *Vera Cruz* is being offered freely at 13d. per lb., but no business is possible at that quotation excepting in the case of small parcels, say a single package. In America the market seems to be much lower, and it would probably be possible to buy at 1s. per lb. in London to-day.

LIQUORICE-ROOT.—A very quiet market; ordinary unpeeled root is worth, according to quality, from 8s. to 8s. 6d. per cwt., good peeled 20s.

MENTHOL.—Rather firmer. On the spot 15s. 6d. per lb. is the last quotation, and at that price business has been done. For shipment there are very few first-hand sellers, but second-hand holders have effected sales in the course of the present week at 14s. per lb., c.i.f., for March shipment, and are still offering at that price.

OIL (COD-LIVER).—Still falling in price. There is scarcely any business doing, nearly all the druggists having bought sufficient for their present requirements. The best-known

brands of new season's non-freezing *Norwegian* oils are being offered at from 130s. to 140s. per barrel, c.i.f., by agents, but brokers tell us that they have sold best new non-freezing *Norwegian* oil this week at 140s. per barrel on the spot. The fishing in Lofoden is now drawing to a close, and it is expected that after Easter prices may show some improvement. The following figures show the result of the fishing, and the quantities of medicinal oil produced in the Lofoden district from the beginning of the season up to the middle of March:—

| Year.                         | 1895<br>March 16 | 1894<br>March 17 | 1893<br>March 19 | 1892<br>March 20 | 1891<br>March 22 | 1890<br>March 22 |
|-------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Fish caught (millions)        | 20               | 12               | 16.2             | 10.4             | 10.6             | 18.5             |
| Medic. oil in hecto-litres .. | 6,467            | 5,330            | 12,854           | 5,980            | 8,754            | 12,270           |
| Other oils in hecto-litres .. | 7,403            | 7,920            | 20,100           | 15,650           | 13,400           | 4,000            |

OILS (ESSENTIAL).—There has been a good demand this week for *English oil of peppermint*, which now ranges in price at from 26s. to 29s. per lb., an increase of from 3s. to 4s. on last week's quotations. *English lavender* oil remains unchanged. Some of the French oil distillers report that *Oil of neroli*, of which the new crop will probably be available at the end of April, will be considerably dearer this season than last. It is said that the price has already been fixed at 450f. per kilo., against 350f. at the beginning of last season. From Sicily *Oils of Bergamot, Lemon and Orange* are all reported to be firmer, owing to the receipt of American orders in that market. The chief feature in the London oil market this week has been the rise in *Chinese essential oils*. *Cassia oil* (70 to 75 per cent.), which could be bought a week ago at about 3s. 10d. per lb., has since been sold at 4s., and 85 per cent. oil at 4s. 3d. per lb. The lowest price is at present 4s. 3d. to 4s. 4d. per lb. *Oil of star anise* (of which the fairly large stock is mostly in the hands of one or two firms) is not now obtainable below 6s. 3d. per lb., although 6s. is the highest price paid so far. On the spot 13½d. per lb. is said to have been paid for oil of *Citronella* in tins. The available stock is reported small. For shipment the quotation is 10½d. per lb., c.i.f. terms, steamer shipment to the end of July. *Lemongrass* oil is held at from 1½d. to 1¾d. per oz. on the spot, according to quantity (the last-named price being for ordinary wholesale lots); and at 1¾d. per oz., c.i.f., April-May shipment. It is said that the bulk of the season's crop has already arrived, very little being now available in India and Ceylon. American *oil of peppermint* (HGH) may be had at 9s. 9d. per lb. on the spot. The importers of *Japanese peppermint oil* have raised their quotations, but second-hand holders have this week sold dementholised oil at 6s. 3d. per lb. on the spot. Forty per cent. oil might probably be had at 7s. 9d. per lb.

OPIMUM.—The London opium market is very quiet, and although prices are nominally unchanged, many holders would be very anxious to sell if they could find buyers. On the whole the position has a decidedly easier tendency. Business is much restricted, and the following are more or less nominal quotations:—Soft shipping, good to fine, 11s. to 11s. 9d.; *Smyrna*, good to fine quality, 9s. 3d. to 9s. 9d.; *Second Druggists* 8s. 6d. to 9s.; usual *Constantinople* kinds, 9s. 3d. to 9s. 9d. Our Constantinople correspondent writes on March 16:—"In sympathy with general favourable condition of the crop, holders have been free sellers, and about 60 cases ordinary druggists have changed hands at 8s. 2d., f.o.b. To-day a concession on this figure could be obtained. Taking the small existencies into consideration, we cannot be far off the bottom now."

OPIMUM ALKALOIDS.—In consequence of the declining tendency in opium lower prices are anticipated for the leading alkaloids. *Morphia* in powder is quoted by the makers at 4s. 9d. to 4s. 10d. per oz. for small wholesale lots, and about 4s. 7d. for large quantities. It is, however, probable that at least one of the makers would accept a little less than these figures.

QUICKSILVER.—Unaltered, at 6l. 10s. per bottle from the importers, and 6l. 8s. 6d. from second-hand holders.



**QUININE.**—The market is firm with a tendency towards higher prices, although the only business reported this week has been one transaction of 3,000 oz H.B., at 11½d. per oz. It is still possible to buy at that figure to-day, although a sale at 11½d. per oz. has been rumoured. The following are the present prices quoted by the manufacturers:—*Howards*, in 1-oz. vials, 1s. 4d. to 1s. 5d.; in bulk, 1s. 3d. to 1s. 4d. *Whiffen*, 1s. 4d. in vials; 1s. 2d. in tins. *Pelletier*, 1s. 5d. in vials. *Milan*, 1s. 4d. in vials and 1s. 2d. in tins. All the *German* brands, 1s. 2d. in tins.

**SAFFRON.**—A recent report by the Austrian Consul in Valencia states that lowest price at which the cultivation of saffron is remunerative is 85f. (pesetas) per kilo., or about 32s. per lb. Until a few years ago the selling-price of high-class saffron ranged from 120f. to 150f., and the culture was therefore very profitable. Since then, however, it has sunk much below the margin of profitability. In addition to this fact, it should be remembered that the import duty on corn into Spain has been much increased of late years, and that therefore the cultivation of cereals is extending at the expense of that of some of the minor crops. Hence, the Consul concludes, it appears very likely that the value of saffron has reached a turning-point, and that we have arrived at the beginning of a period of high prices which may last several years.

**SALICIN.**—The price remains 8s. per lb., but the demand for the drug has been so great lately that an advance would not be altogether surprising. One or more of the manufacturers are said to be rather behindhand with their deliveries. It is said that the reason for this is that the quality of the raw material is becoming more and more unreliable.

**SENNA.**—A few small sales of fine-picked Alexandrian senna leaves have been made at 1s. per lb. The supply is not very large, neither is the demand. Broken leaf offers at 4d. to 6d., *sorts* at 2½d. to 3d. per lb., and *siftings* at from 1½d. to 3½d. per lb. There is considerable stock of senna pods at from 5d. to 6d. for good quality, but for this there is no demand whatever. The stock of *Tinevelly* leaves has become much reduced lately, and the demand remains good at high prices.

**SHELLAC.**—At auction this week only 109 cases were offered, all without reserve. These brought lower prices for *Orange* as well as for *Button lac*—namely, 104s. to 106s. for fair reddish, unworked second orange, 109s. to 111s. for second *Button*, and 91s. for resinous third *button*. The price of *TN Orange lac* on the spot is nominally 106s. to 107s., and of *AC Garnet* 103s. per cwt.

**STAR-ANISE** has not moved up in sympathy with the other Chinese products. On the spot 70s. is asked for good genuine *Chinese*, but 67s. 6d. would probably still be accepted.

## Chemicals and Conventions.

"MR. LEO VOSSEN, of Germany," said a mutual friend, introducing to a CHEMIST AND DRUGGIST representative a gentleman who looked like the typical Western farmer of the American illustrated papers. Mr. Leo Vossen addressed our representative in excellent English, and, pulling out a pencil-stump, marked down an appointment upon the outside of his left-hand cuff, which already bore a fair crop of hieroglyphics and several chemical equations.

"The salicylic-acid convention?" asked Mr. Vossen, repeating the subject upon which the C. & D. man had expressed a desire to interview him. "I am not at all sure that I can tell you anything new about it. In the first place, I am an 'outsider,' and therefore not in the confidence of the 'convention uncles'; secondly, you have lately published in your own journal all there was to be said about the break of the Convention, including some things that were new to us in the trade." THE CHEMIST AND DRUGGIST representative generously affected to ignore the suspicion of a sneer that lay in the end of the sentence, and turned the subject.

When at the appointed time he met Mr. Vossen, that gentleman proved himself an excellent and most entertaining companion, with nothing more of the Western farmer about him than his outward appearance and a full dash of the

shrewd mother-wit which is believed to be that agriculturist's portion. Mr. Vossen, who has lately begun to manufacture salicylic acid for sale in the open market, has travelled all over Europe and North America in the pursuit of his business as a chemical-manufacturer. He has relations in one way or another with several of the syndicates that hold the German chemical-trade in a web more complicated than a moth's and closer-fitting than the shirt of Nessus, and what he doesn't know about conventions isn't worth knowing. "I tried," says our representative, "to plunge in *medias res* with a question concerning the cost of production of salicylic acid; but Mr. Vossen had made up his mind, first of all, to enlighten me on the subject of conventions in general, and as he is a gentleman who knows precisely what he wants and means to have it, I just sat down and listened, making a note here and there. This is the substance of Mr. Vossen's remarks:—

### THE RISE OF THE CONVENTION SYSTEM.

"The application of the physical and chemical discoveries of the last twenty or twenty-five years to the industry of manufacturing chemicals has caused a considerable over-production in almost all varieties of chemicals. The first consequence has been the disturbance of the equilibrium between output and consumption; the next, a lowering of the price of many manufactured chemicals almost to the limit of the cost-price of the best-equipped works, while the smaller or less well-organised factories have in many cases been compelled to shut up, after selling for a while at a loss. When this fact became generally recognised in Germany—and, for the matter of that, in Britain and other countries—the establishment of so-called conventions or syndicates was only a question of time. In Europe, Germany, of course, took the lead."

"Why 'of course'?"

"Because German manufacturers more than those of any other nationality are thrown in each other's company under circumstances connected with business, and yet not of a competing nature. For instance, our laws relating to workman's insurance, and various other industrial enactments, constantly oblige one to meet one's fellow-manufacturers; and one effect of this legislation has been that men, who formerly did not know each other and were full of suspicions and unfriendliness, have come to recognise the possibility of an honourable understanding. There were, of course, a good many conventions in existence in Germany long before the inauguration of the era of 'social legislation,' which has brought the manufacturers, as well as the workmen, closer together. I need only mention, as an example, the Alizarin Syndicate, which was the first great chemical convention in Germany. It still exists, but its members no longer make the large fortunes they amassed in the heyday of its activity. Unfortunately, almost all the first conventions were established upon a wrong basis. In most cases the conditions were at once too stringent, and so badly drawn up as to leave loopholes, of which disloyal manufacturers took advantage to compete unfairly while ostensibly keeping within convention-lines. Naturally, most of these conventions collapsed after a more or less precarious existence. An interregnum of free competition, more bitter than ever, followed; but the first conventions had, at any rate, laid the groundwork of a better understanding, and from their ashes there arose the so-called 'free conventions,' which are at present the rule in the chemical-industry. These organisations simply consist in an agreement among the manufacturers not to sell below a certain price, an umpire being appointed to see that the undertaking is carried out fairly. This umpire is often a lawyer, who has the confidence of all parties. He has the right at any time to inspect the books of the Convention members in so far as they relate to the articles mentioned in the agreement, and if he detects anything wrong he calls a meeting of the parties interested and submits a report. The chief use of these free conventions is that they protect the manufacturer against extortion on the part of the buyer. Suppose I offer prussiate of potash to a buyer; the buyer replies that he has a lower quotation—lower, in fact, than the limit laid down by the Convention. I have reason to believe that his statement is untrue; but instead of telling him so I instruct the Convention umpire to call upon my customer. If that gentleman refuses to give the name of the firm who



have quoted, the umpire calls upon all the members of the Convention to say whether they have made offers to Mr. So-and-so, and, if necessary, inspects their books. But the necessity for such action rarely arises. You know that in Germany a strong element of, shall I say, 'personality' runs through all business circles. The American system of subordinating all considerations to that of 'besting your neighbour,' is, on the whole, contrary to our national character. If the would-be buyer stood convicted of having lied, the convention-members would decline to supply him, and his social position among his fellow-citizens would become far from pleasant, especially if he happened to live in one of the many small business centres of Germany. As a rule, therefore, the authority of the Convention umpire is sufficient to kill in the bud every attempt at extortion.

#### THE "CONTINGENTIRTE CONVENTIONEN."

"Besides the 'free' conventions there are the so-called quota conventions (*Contingentirte Conventionen*), with or without a central business clearing-house which apportions the orders, receives the cash, and settles the account between the members.

"As to the effect of the Convention system, I think that, upon the whole, it has been beneficial. In nearly all cases where the Convention managers have been wise enough to resist the temptation to drive up the prices to an exaggerated figure these conventions have worked beneficially, not only for the manufacturer and the middleman, but even for the consumer. Unfortunately, discretion has not always been observed; for instance, the opportunity afforded by the sudden increase in the demand of cyanide of potassium for the gold-mining industry was grossly abused by the members of the Convention in prussiate of potash, who raised their prices to a very considerable extent. The result was that a number of 'outsiders' came into the field, and, having purchased new processes for manufacturing prussiate of potash, commenced to compete tooth and nail with the established makers. Many of the 'new processes' turned out to be quite unsuccessful in practice, and a mint of money has been lost in some of them; but the market was flooded with stuff which had to be sold, the quotations fell, and just at that time the consumption of cyanide began to diminish very considerably in consequence of the introduction of new extracting-processes in gold-mining. Soon, therefore, it will be impossible for any except a few of the best-equipped factories of prussiate to continue the manufacture of that salt upon a paying basis."

#### THE "CONVENTION-UNCLE."

"Has the placing of so much power in the hands of an umpire been found to work well?" "Very well indeed. In the first place, the umpire or *Vertrauensmann* (trustee) is usually a doctor of law, frequently an ex-State official, whose incorruptibility may be taken for granted. His appointment is subject to periodical re-election. So far as I am aware, no instance is known in which the umpire has abused his trust. It is he who calls together the members of the convention when necessity arises. Many of the conventions—such, for instance, as that in oxalic acid, prussiate of potash, and bromide of potash—are international, and the Savoy or the Royal Hotel in London often entertains the convention-uncles of these syndicates."

#### SALICYLIC ACID.

"But," objected our representative, "I want to hear your views about salicylic acid."

"I am coming to that now," said Mr. Vossen. "My remarks on syndicates were by way of introduction. The salicylic-acid Convention is another instance of the short-sightedness of the policy of trying to keep up a price at an inordinate figure. The manufacture of salicylates was known to be so profitable that patentees and discoverers of 'new and improved processes' for its preparation had little trouble in finding capitalists to provide funds. A number of new factories embarked upon the industry. Some of these were induced to enter the Convention, but at last the pressure became so great that it was decided to make no further bargains with newcomers. The result has been that in January the syndicate found itself compelled to reduce the price to such a figure that only thoroughly well-equipped factories can still sell at a profit. The Convention managers hope that the greatly reduced price of salicylic

acid will increase the consumption of the drug to such an extent that the enlarged output will partly compensate for the diminished ratio of profit. For the moment, however, the contrary appears to be the case. Buyers generally anticipate still lower quotations, and it is, therefore, very difficult to place any contracts at all. Within a few months we shall probably find out which firms are able to continue the manufacture at the current rate of selling prices. Several brands, I have no doubt, will disappear from the market. The survivors, after having fought the battle to the bitter end, will probably end in raising the rates again. I only hope that they will be wise enough to recognise that moderation is their best policy."

"Do you mean to say, Mr. Vossen, that the manufacture is no longer profitable?"

"I do not say that, but there is certainly not much to be got out of the article now. Some time ago, when the question arose of making terms with one or two new makers, the cost-price of salicylic acid was calculated by the syndicate at 4.50m. per kilo., or about 2s. per lb., and upon that basis an arrangement was concluded with the newcomers. But, of course, one or two makers may be in the possession of improved processes of manufacture which enable them to turn out the drug at a much lower cost-price."

"You spoke about an increased consumption. How high do you estimate the present consumption of the acid and the salts together?"

"Very difficult to say," answered Mr. Vossen. "One of the leading spirits of the Convention, who is probably as near to the mark as anyone can be, puts it at 500 tons a year, which is greatly in excess of the quantity you recently mentioned in your journal. By the way, how did you arrive at that figure? Was it based upon the official German export figures?"

I nodded assent.

"Then you may safely assume that you are wrong. Our official statistics are worth nothing. In commercial circles we have for years been discussing schemes for making them reliable, but up to the present, in vain. How is it, by the way," continued Mr. Vossen, "that salicylic acid has never been manufactured in England? That is surely very odd!"

Our representative could give no explanation of the fact.

"Well," said Mr. Vossen, "perhaps I can guess at any rate one reason that would stand in the way. When I mention it you will probably put it down to a feeling of Chauvinism on my part. I assure you that I am not animated by any motive of that kind. The fact is that the average British workman in chemical-factories is inferior in intelligence, in consideration for his employer's interest, and in pride in his work to his German colleague. In most English chemical-works that I know (and I know a great many) the hands will scamp their work as soon as the master's back is turned. Now, the manufacture of salicylic acid is an extremely delicate process, and demands the closest attention. The temperature during removal of the resins from the crude salicylate of soda in its conversion into salicylic acid must be watched second by second. If anything goes wrong, the whole batch has to be re-converted into carbolic acid. Your manufacturers know all this, and that is probably one reason that has kept them from laying down expensive salicylic-acid plant."

Our representative tried to put in a word in defence of the Britisher, but Mr. Vossen would not hear of it. "Don't tell me," he said, "I know almost every chemical-factory in England. And haven't I travelled for years among the textile makers and dyers in Yorkshire and Lancashire? Good Heavens, what 'uncles' you have among your overseers there. Taking bribes, 'commissions,' spoiling whole batches of goods in pure recklessness, everything by rule of thumb. Himmel! I know them—those 'uncles.' The sooner that Augean stable is cleared the better for your national industry."

With this the discussion was diverted into other directions; but later on, while comparing notes on things in general over a glass of lager beer, Mr. Vossen suddenly harked back again to his favourite convention-subject, and observed that fines for breaking conventions which formerly were the rule, and were generally enforced by each member depositing a certain sum with the convention manager, to be forfeited upon proof being given of the infringement of the convention rules, are now almost obsolete.





### Memoranda for Correspondents.

*In letters for publication correspondents are requested to express their views as concisely as possible.*

*Correspondents should write on one side of the paper only, and devote a separate piece of paper to each subject of inquiry.*

*The name and address of the writer should accompany all communications with, if desired, a distinctive nom-de-plume.*

### Maintenance of Prices of Proprietary Articles.

SIR,—Judging from the lack of correspondence on this subject, chemists do not seem very enthusiastic about the movement. This is not to be wondered at, seeing that the net result of the whole elaborate arrangement is only—as one of your correspondents points out—“that the poor retail chemist may get 1*d.* instead of  $\frac{1}{2}$ *d.* profit.” Now, I may take it for granted that some manufacturers of proprietary articles do consider it worth their while to try and gain the goodwill of the chemists who retail their goods, otherwise they would not take any steps at all towards maintaining prices. I would ask these gentlemen whether they really consider that the penny or so which they propose to secure to the chemist is a reasonable or living profit on his average turnover in the goods of the firms in question? Chemists have come to literally hate the patent-medicine trade—though, doubtless, many of them have only themselves to blame for having initiated the suicidal cutting system in their own districts—and it will have to be a fairly liberal offer that will woo them into giving proprietaries even “a fair chance,” as I have been sometimes asked to do by representatives of various firms.

Why not abolish cutting and reduced prices altogether, and make the advertised price the actual selling price? Has not the farce of advertising goods at what is practically an impossible price—*i.e.*, a price which is never obtained for them—been carried on long enough? I would suggest that the stamp-duty, in the case of dutiable articles, be included in the actual price of the medicine, making it 1*s.*, 2*s.* 6*d.*, and so on. Such a system would cost the manufacturers no more than the present half-hearted one, and would at once earn them what they seem anxious to secure—*viz.*, the goodwill and co-operation of the retail chemist, who must, under existing circumstances, be, to a greater or lesser extent, a distributor of other firm's goods. If the manufacturers can enforce the one scheme, they could enforce the other. It may be argued that it would place them at a disadvantage against other firms whose goods were still sold at cutting prices, but one's everyday experience does not support such a contention. Brown's female pills, advertised at 2*s.* 9*d.*, do not appear to be misplaced by Jones' female pills, advertised at 1*s.* 1*½d.*. People do not cease to buy Smith's ointment at 1*s.*, although they can obtain Robinson's—advertised to cure the same complaint—at 9*½d.* The fact is that the public generally make up their minds to buy a particular article, and will have it irrespective of price, though they naturally go where they can buy it cheapest. They would as readily pay 1*s.* as 9*½d.* if they found they could not obtain it for less. Yours faithfully,

Goole.

JAMES E. DEWING.

### A Disclaimer.

SIR,—With reference to the remarks in your current issue, under the heading “Inaccurate Dispensing,” you will gather from the enclosed letters of mine, published in this week's *Chemical News* and *Tit-Bits*, that I have emphatically disclaimed responsibility for any portion of the article from which you quote. This account, which many readers must have regarded simply as an “inspired” advertisement of myself, was written absolutely without my knowledge or consent, and I had no suspicion of its existence until after the paper had come from the press. The “personal” element in present-day journalism is abhorrent to me; so it

will be understood how deeply annoyed I have been by the publication of a production of this character about myself. Had my consent been asked, it would have been unhesitatingly refused. Moreover, the account is inaccurate in various respects; and one of the several statements attributed to me, of which I particularly disapprove, is embodied in the very passage to which you have especially called attention.

The contributor (a friend and former pupil, who, I am convinced, was actuated by amiable motives) gathered his materials in the course of a private conversation, during an ordinary visit, such as he had been accustomed sometimes to pay me; and he avoided giving the slightest hint of his intention, by word or deed. In the belief that our talk was entirely confidential, I probably did not trouble to carefully prepare or select my expressions; but as far as I can recollect a discursive and friendly colloquy, of which there was no apparent reason to take especial note at the time (many weeks back), I made no such sweeping statement as that quoted, and did not assert that “very often” inaccurately made-up prescriptions came under my notice.

I will add that, in my opinion, remembering the enormous multitude of prescriptions dispensed, the number of errors made is surprisingly small. In fact, I entirely endorse your own views on the subject.

The introductory remark quoted by you, and other remarks of an allied nature, merely reflect the conceptions of the “interviewer.” I should not think of maintaining that the quality and purity of any article whatever can be “guaranteed” by an occasional analysis of a single sample.

You have perhaps rather gone out of the way to refer to a certificate of mine given long ago on a certain much-advertised preparation for the hair; but I do not complain of this, as it gives me an opportunity of frankly admitting that (although I have never thought there was much to criticise in the very moderately-worded certificate itself, which was written in perfect good faith) I consider I should have been better advised in declining to certify at all; seven years have elapsed, however, and I hope I am a little wiser now. The fact is, among the hundreds of applications of various kinds received, analysts—I refer particularly to young analysts—may occasionally stand in need of a little guidance and judicious advice as to pitfalls to be avoided. Such guidance has been afforded to some extent latterly by the Institute of Chemistry.

What actually happened at Burlington House, on the occasion to which you allude, was this. One of the Fellows of the Chemical Society, without giving me any previous notice of his intention, got up and criticised me in connection with the above-mentioned certificate; and one other Fellow, following him, referred to the matter. But I may remark, without entering into the question of the justice of the criticism, that a large number of the Fellows present evidently thought that I was taken unawares and at a disadvantage; and, indeed, several Fellows of the Society, total strangers, voluntarily came to me afterwards and expressed this opinion. The incident occurred during a meeting called to discuss the proposed alterations in the rules of the Society; some feeling was shown all round. My name was on the list of members asking for the meeting, and no doubt I was considered a fair mark for “destructive criticism,” especially as such criticism served as a useful diversion from the real question under discussion.

I feel that this is a decidedly “personal” sort of letter, but perhaps under the peculiar circumstances, this will be pardoned; and, with an apology for taking up so much of your valuable space,

I am, Sir, your obedient servant,

E. GODWIN CLAYTON.

43 and 44 Holborn Viaduct, London, E.C.,  
March 23.

### The Post Office and Early Closing.

SIR,—“R. U. B.” mentions a troublesome question which should be seriously tackled as in many towns the success of early closing has been endangered thereby. However, upon application to the proper authorities, even now this difficulty can be overcome. All the branch post-offices in this town are closed at 1 P.M. on Thursday, by special permission of the department, obtained by means of petitions from the



Shop Assistants' Association to the Secretary of the Post Office and to our local authorities; but first of all the sympathy of the local post-master should be enlisted. The weekly half-holiday is a distinct success here as far as all trades are concerned except the drug-trade; some chemists labour under the impression that the B.P. cannot do without them and their P.B. even one half-day per week, and that their assistants and apprentices need nothing but work.

Let us hope that the Bill will be the means of disintegrating the phantasms we are troubled with by compelling all shops to close at reasonable hours; there will then be a chance of making life what it should be.

Rhyl, N. Wales.

H. SANTLEY JONES.

SIR,—Does not your correspondent "R. U. B." refer to what happened some time ago, as now many sub-post-offices enjoy the privilege of closing early (1 or 2 P.M.) one day during the week?

Respectfully yours,

ACETUM. (16/49.)

SIR,—In reply to "R. U. B." re "Post Office and Early Closing," the Post Office authorities have long ago recognised the difficulty of those tradesmen who have offices not being able to join the early-closing movement, and permission has always been given to close—that is, during the past three or four years. If "R. U. B." consults his list of money order offices—for I suppose he has an office—he will find there are a large number of even telegraph money order offices which already close early. If "R. U. B.'s" friend were to write to the Secretary, General Post Office, I am sure things would be put right for him.

Yours faithfully,

Taunton, March 26.

J. E. KIRKPATRICK.

#### The Pharmacist in Fiction.

SIR,—The pedigree of the pharmacist, expressed in sporting terms, would read "out of Druggist, by Apothecary," and this being so I am somewhat surprised that Mr. Meyjes in his capital paper (which has, I see, suggested an excellent "leader" in the *Daily News*) makes no mention of our old friend Abel Druggier in Ben Jonson's "Alchemist." Abel, it is true, is described in the play as a "tobacco man," and a member of the Grocers' Company; but in those days the druggists were a section of the Grocers' Company, and it is abundantly evident that Abel was a druggist. His name alone would prove it, but, in addition, we have Face's description of him.

"He has his maple block, his silver tongs, Winchester pipes, and fire of Juniper; a neat, spruce, honest fellow."

Then, again, Subtle suggests that "He may have a receipt to make hair come"; and says further, "Ay, I know you have arsenic, vitriol, sal-tartar, argaile, alkali, cinopar: I know all." It is scarcely necessary to say that Abel is one of the leading characters in the play, and was a favorite part with Garrick.

Mr. Meyjes will be glad to know of two pharmacists in modern fiction who do much to relieve our hitherto much-maligned profession of the odium of which he speaks in his opening paragraph. I mean Mrs. Margaret Deland's "Mr. Tommy Dove" (who figures prominently two of her books), and the hero of the first and best story in Mr. Wedmore's "Renunciations." The former is an excellent creature in every way, though one of the simplest; the latter is one of the finest characters in contemporary fiction, short as is the story, and small as is the part in which he figures.

There is a rascally old chemist in one of Mr. Douglas's recently-published "Chinese Stories," a book I can heartily recommend to such of your readers as are not being worked to death by the influenza epidemic.

Yours &c.

Epworth, March 23.

C. C. BELL.

SIR,—Supplementary to the extremely entertaining paper by Mr. A. C. Meyjes, reported in your last issue, I thought it might be of interest to cite a couple of instances—one ancient, one modern—of the appearance of the chemist in fiction which have lately come under my notice.

One of the characters in Scott's "Kenilworth" is represented as curing a case of poisoning by means of the once much-esteemed "orvietan," or Venice treacle (Theriac

Andromachi), "that noble medicine which is so seldom found genuine and effective within these realms of Europe." He is described visiting shop after shop in search of the ingredients of this polypharmic compound.

The medicines Wayland first asked for were readily furnished, each in succession, but those which he afterwards required were less easily supplied, and more than once, to the surprise of the shopkeeper, he returned the gum or herb, that was offered to him and compelled him to exchange it for the right sort, or else went to seek it elsewhere. But one ingredient in particular seemed almost impossible to be found. Some chemists plainly admitted they had never seen it; others denied that such a drug existed; and most of them attempted to satisfy their customer by producing some substitute, which, when rejected by Wayland as not being what he had asked for, possessed, they maintained, in a superior degree, the self-same qualities.

At last he finds a shop kept by one "Yoglan the Jew," a little old smock faced man, who, with many courtesies, asked Wayland what he was pleased to want. He had no sooner named the drug than the Jew started and looked surprised.

"And vat might yur vorship vant with that drug, which is not named mein Gott! in forty years, as I have been a chemist here?"

"I only wish to know if you have what I want, and are willing to sell it."

"Ay, mein Gott, for having it, that I have, and for selling it, I am a chemist and sell every drug. But it will cost much moneys—vat I have cost its weight in gold—ay, gold well refined—I will say six times. It comes from Mount Sinai, where we had our blessed law given forth, and the plant blossoms but once in a hundred years." So saying the Israelite took his bunch of keys, and, opening with circumspection a cabinet which seemed more strongly secured than the other cases of drugs and medicines amongst which it stood, he drew out a little secret drawer, having a glass lid and containing a small portion of a black powder. "Have you scales?" said Wayland. The Jew pointed to those which lay ready for common use in the shop. "They must be other than these," said Wayland sternly; "know you not that holy things lose their virtue if weighed in an unjust balance?"

The Jew hung his head, took from a steel-plated casket a pair of scales, beautifully mounted, and said as he adjusted them for the artist's use: "With these I do mine own experiment—one hair of the high priest's beard would turn them."

So much for the ancient; now for the modern instance. It occurs in a short story by Barry Pain, entitled "Payment," and gives as inadequate and unjust a picture of the chemist as any of those quoted by Mr. Meyjes. A chemist's assistant is making up a prescription at closing time. "On the other side of the counter stood a young man, tapping impatiently with his foot; he and the assistant were to go for a walk together, and this delay was irksome. 'Blest if we've got one of the blue-ribbed bottles left!' said the assistant. 'Well, it don't matter: I can put it in one like the other. This'll make it all right.' He held up a large label with the words *Poison—not to be taken*, printed on it in red. 'Yes, there's no mistaking that,' said the other young man rather irritably. 'Do come along, I've stood 'ere 'alf an hour if I've stood a minute.' The assistant attached the labels to the bottles hurriedly."

The story shows how the liniment was labelled with the mixture label, and *vice versa*, and how this mistake was the means of saving a life; for the leading character, in a moment of passion, attempted to murder his wife by giving her a dose of the poisonous embrocation.

Let us hope that some English writer will yet arise who will paint the pharmacist in a purer and truer light than that in which he has hitherto been portrayed.

Yours truly,

Brighton.

C. S. ASHTON.

#### Irish Chemists' Assistants' Association.

SIR,—In your Irish news of March 16 appears a note on the formation of a Chemists' Assistants' Association in Dublin, which implies that the principal object of the Association is "the protection of assistants' interests in relation to their employers and the Pharmaceutical Society." Circumstances may arise under which the Association will consider it advisable to take steps to protect such interests, but this is by no means the primary object for which the Association is to be formed. On the contrary, its members will strive to induce and encourage employers and the Pharmaceutical Society to assist them in sustaining an Association founded for their mutual benefit, which should bring the members of the profession together, and give the



younger members the benefit of hearing discussed at the fortnightly meetings topics concerning the trade. As the Association increases there will be opened in connection with it a reading-room and library, in which the industrious student will have ample opportunity of satiating his thirst for knowledge.

Yours faithfully,  
Dublin, March 25.

VERITAS. (16/27.)

#### Sole Agency.

A Rochdale chemist writes to us on the subject of one of our legal reports last week, and after narrating his own experience, states that he has learned from it two lessons:— (1) To always have written agreements when dealing with firms of other than standard reputation; and (2) to have all goods carriage-paid. Else the railway company thus becomes one's agent, and expense is incurred by having to defend an action in another town.

#### Alcoholic Galenicals.

SIR,—You published recently my remarks on the rapid estimation of the percentage of alcohol in our alcoholic galenicals by means of a sensitive thermometer—such, for example, as the "biological thermometer," bearing my name, sent out by Messrs. Maw, Son & Thompson. Allow me to give more precise data. The method given was to mix equal volumes of any tincture, liniment, spirit, or brandy, and water. Suppose we use the 2-drachm cylindrical minim measure, absolute alcohol gives  $12^{\circ}$  of heat, or about  $1\frac{2}{10}^{\circ}$  for every 10 per cent. of alcohol by volume. If we use a 1-oz. phial graduated in drachms, mixing 3 drachms of water and 3 drachms of the spirit, absolute alcohol will give  $16^{\circ}$  of heat,  $1\frac{6}{10}^{\circ}$  for every 10 per cent alcohol by volume. Further, this method is capable of detecting small quantities of alcohol which may occur as an impurity in chloroform and in the essential oils. If 1 drachm of chloroform be shaken with 1 drachm of water, both being at the same temperature, there is scarcely any rise of temperature; if there be alcohol, the rise of temperature is in ratio to the alcohol.

So turpentine, oil of rosemary, &c., mixed with an equal volume of water, afford no rise of temperature unless alcohol be present. A sample of "pure ether" so examined gave  $6^{\circ}$  of heat. Whether this sample is pure ether or not we must leave. Sweet spirit of nitre also affords  $10^{\circ}$  or more of heat. The simple fact that alcohol mixed with water, even in quantities of 1 c.c., can afford measurable degrees of heat, seems an important and interesting hint for the practical pharmacist and general practitioner.

Yours faithfully,

J. BARKER SMITH, L.R.C.P., Lond.

Dulwich, S.E.

#### LEGAL QUERIES.

Immediate information on pharmaco-legal matters is available in "Pharmacy and Poison Laws of the United Kingdom," Alpe's "Handy-book of Medicine-stamp Duty," and THE CHEMISTS' AND DRUGGISTS' DIARY.

81/19. *Nux Vomica* submitted to Somerset House a formula for a colic draught composed of asafoetida, aloes barb., capsicum, liq. amm. fort., amm. carb., æth. meth., water, s. vini meth., asking if he might sell a preparation so made. This was refused, on the ground that it was not impossible to be used internally. Can "*Nux Vomica*" add anything to it, without impairing its properties, which will satisfy the Board? [This subject is dealt with fully in Alpe's supplement to the "Handy-book," and on page 212 of the 1895 DIARY. The presence of a poison appears to be regarded by the Board as essential.]

8/58. W. D. asks whether a chemist, being a member of a parish council, can contract with the council to supply medicines? [By the Local Government (England) Act, 1894, section 46 (1) (e), it is laid down that "A person shall be disqualified for being elected, or being a member or chair-

man of a council of a parish or of a district other than a borough or a board of guardians, if he is concerned in any bargain or contract entered into with the council or board, or participates in the profit of any such bargain or contract or any work done under the authority of the council or board." But section 46 (3) provides that where a person who is a parish councillor, or is a candidate for election as a parish councillor, is concerned in any such bargain or contract or participates in any such profit as would disqualify him for being a parish councillor, the disqualification may be removed by the county council if they are of opinion that such removal will be beneficial to the parish. There is a similar disqualifying provision in the Local Government (Scotland) Act of 1894, section 20. It follows, therefore, that a chemist councillor supplying goods would render himself liable.]

16/12. J. J. C.—We should think if your liquor carnis co. did not contain any of the liquor carnis well known in the trade under that title you would not be justified in supplying it to the public under that title. We do not see how a medical man prescribing it as such (knowing the article) could make any difference. Medical men are no more entitled than other persons to adopt other people's property.

16/16. A. N. asks if it is compulsory that a manager's name in the employ of a company carrying on a drug-business should appear on the label of any mixture containing a scheduled poison? [It is not. The company is the seller for the purpose of the label, and it is essential that their name should appear on the label.]

14/55. *Rhei*.—We have stated many times that according to the law as construed in the Pharmaceutical Society v. London and Provincial Supply Association (Limited) a limited company may call themselves chemists and druggists, and keep open shop for the sale of poisons, even though none of the shareholders are qualified. The individual, however, who actually sells the poison is liable to a penalty if he is not qualified. You should read our "Pharmacy and Poison Laws," 2s. 6d.

15/65. *Gentian* says he has four 1-drachm pipettes graduated up to 60 minims, which he uses to measure hydrocyanic acid, &c.; he has also 10-oz. and 20-oz. graduated earthenware rings. The London County Council refuse to stamp any of these. Is it illegal to use them? [It is illegal to use them, or to have them in possession for use for trade. It is probable that if "*Gentian*" could satisfy a court that he kept the measures apart from other measures for use only in manufacturing (in which might be included compounding), no fine would be imposed. But such proof would be difficult. We do not quite understand why the County Council refuse to verify the pipettes. "*Gentian*" would do a service by getting an authoritative explanation. The graduations of the earthenware rings it is obvious cannot be properly verified.]

#### MISCELLANEOUS INQUIRIES.

Back numbers containing formulae, educational or other specific information can be obtained from the Publisher.

N.B.—We destroy anonymous letters. We do not answer queries of the kind here dealt with by post. We ask that separate queries shall be written on separate sheets of paper.

2/61. *Subscriber*.—If your Ginger-beer continues to ferment in the bottles, that is strong evidence that the liquid is not well strained before bottling. The surest way to prevent continuous fermentation is to Pasteurise—i.e., bring the liquid to the boiling-point, whereby the vitality of the yeast is destroyed. If you cannot do that, then, after straining, add to each gallon 5 gr. of salicylic acid, and bottle, but do not cork for half an hour. You should be careful that the



bottles are well steeped in boiling water before they are sent into the bottling-house.

262/43. *Ntal*.—Digestive syrup.—See *C. & D.*, October 13, 1894, page 364.

4/53. *E. H.*.—Waterproof Court-plaster is made by coating silk with thin sandarac varnish, then with isinglass solution.

3/70. *H. M. H.*.—Fumigating Wood to Darken it.—We imagine that sal ammoniac is used for this purpose.

3/55. *A. S.*.—A saturated alcoholic solution of alnm will not act as a barometer. You are doubtless thinking of the camphor barometer, for which see "Scientific Mysteries."

3/53. *Deron*.—Nails Splitting.—Nothing short of morning and evening attention to the nails will prevent this. Use ordinary manicure instruments, and apply every night a glycerine and lanoline cerate, such as:—

|                     |      |
|---------------------|------|
| Zinc oleate .. .. . | 5ij. |
| Glycerin .. .. .    | 5ij. |
| Lanoline .. .. .    | 5j.  |
| Mix.                |      |

3/67. *Britannia*.—Electrolytic Alkali is not yet a commercial product. See *C. & D.*, December 10, 1892, page 832, and September 22, 1894, page 457.

3/40. *W. G.*.—The greasy tins can be cleaned with boiling water to which caustic soda is added in the proportion of 1 lb. to 12 gallons. You can buy caustic soda 60 per cent. by the hundredweight at about 12s. per cwt. Try a chemical merchant, and refer to our DIARY Buyers' Guide, page 152. The ordinary stick caustic soda is too fine for the purpose.

3/66. *Dermatol.*.—Hair-restorers.—See *C. & D.*, August 11, 1894, page 264, and German specialties, March 16.

4/2. *Peptone*.—Glycerin. Pepsin. Acid.—See *C. & D.*, December 16, 1893, page 878.

3/10. *Agra*.—(1) Glycer. acid. tannic. is described in the British Pharmacopoeia. (2) We cannot assist you in this matter. (3) See the paper by Mr. Sage in our issue of March 9, page 390. For stills see page 114 of the DIARY.

6/9. *Wine-presses*.—Translations.—We are afraid that the distance of your town from England and the consequent loss of time in mailing copy backwards and forwards would militate against your obtaining translation work of the kind you desire. Where time is not the principal object, however, you would probably stand a fair chance. The fees vary from 15s. to 35s. per 1000 words, according to the nature of the work. You should apply to the Publisher for the charges for Miscellaneous advertisements.

22/95. *Subscriber*.—Poisoning by Lead produces a great variety of symptoms, but by far the most common are weakness, trembling and cramp-like pains in the muscles of the arms, aching in the joints, especially the knees, and almost always severe and persistent colic. These symptoms can, of course, be caused otherwise, but then they are without the one absolutely characteristic sign of lead poisoning—the blue line on the gums. This is a blue-black mark along the margin of the gum, just where it joins the tooth, and it is due to a deposit of lead sulphide, from the lead in the blood of the gum coming in contact with the sulphuretted hydrogen in the tartar of the teeth. The treatment is simple. First find the source of supply and stop it, making certain that no

more of the poison enters the body; and, secondly, get rid of the lead already in the body. This is most rapidly done by giving iodides, the lead salt formed from them being easily excreted, and 5 gr. of iodide of potassium should be taken three times daily until all the symptoms have disappeared.

6/1. *Picrate*.—(1) Good descriptions of picric acid and picrates are given in "Watts's Dictionary." (2) Melinite is said to be compressed picric acid. It is certainly not the most explosive substance known. Some of the metallic compounds of acetylene are intensely explosive.

10/1. *J. C.*.—We do not know of the syndicates in the U.S.A. who buy the patent rights of any article patented in that country. Messrs. Munn & Co., of 361 Broadway, New York, are prominent patent-agents, and it would be a part of their business to negotiate sales of patents.

247/35. *Charles*.—"Lessons in Elementary Practical Physics." By Balfour Stewart and W. W. Haldane Gee. Vol. I., General Physical Processes. 6s. Vol. II., Electricity and Magnetism. 7s. 6d. (Macmillan)

240/90. *Oldham*.—Amber, kauri gum, and artificial perfumes are readily obtainable through wholesale houses, and the last named through essential-oil dealers.

247/5. *S. O'Braun*.—In regard to neatsfoot oil, see reply to "Lignum," March 16. Salicylic acid is the best preservative for cooked food such as potted meats. Use 4 gr. to each pound of the meat.

2/58. *Lemon*.—Lemon-squash, as sold by grocers in bottles, is generally unfermented and unclarified lemon-juice made into a cordial with syrup. It is a by-product in the manufacture of candied lemon-peel.

2/70. 139 *E. (Byculla)*.—Your Cod-liver oil Emulsion is yellow because it contains yolk of egg, but that can be to some extent overcome by mixing the oil, before adding the yolk, with half its volume of lime-water. Taking your formula, we should alter it to read as follows:—

|                     |      |
|---------------------|------|
| Ol. morrhue .. .. . | 3xl. |
| Liq. calcis .. .. . | 3xx. |
| Mix by shaking.     |      |

|                          |       |
|--------------------------|-------|
| Vitell. ovi .. .. .      | ij.   |
| Pulv. anacis .. .. .     | 3ij.  |
| „ tragacanth .. .. .     | 3iss. |
| Spt. chloroformi .. .. . | 3ss.  |
| Aq. .. .. .              | 3iv.  |

Mix the gums with the spirit and 1 oz. of water, then add the rest of the water and stir well with the egg-yolks. To this add the oil mixture. Transfer to a bottle and shake well; then add the following, previously mixed:—

|                            |         |
|----------------------------|---------|
| Elixir saccharini .. .. .  | 5ij.    |
| Ol. caryophylli .. .. .    | ℥viiij. |
| „ amygdal. essent. .. .. . | ℥x.     |
| „ menth. pip. .. .. .      | ℥vi.    |
| Acid. salicylic. .. .. .   | 5ss.    |
| Spt. rectificat. .. .. .   | 3iv.    |

Finally dilute with the solution of hypophosphites—viz., 5iiss. each of the calcium and sodium salts in enough water to make the emulsion measure 80 oz.

7/62. *Yorkshireman*.—See "Counter Practice" for the prescriptions which you desire. Sticky Fly-papers can be made by spreading artificial bird-lime (thinned by heat) upon parchment-paper. For bird-lime, see 1894 DIARY page 257.

7/49. *New Zealand*.—The price of Kaolin is 18s to 25s. per ton in Cornwall. You can sell it to such firms as Dulton, of Lambeth, or through a Mining Lave broker in that line of goods.



7/57. *In Vino Veritas* asks:—"Is silver-leaf coating on pills detrimental to health if taken for any length of time? Is it pure? If not, what is the impurity, and how long could pills so covered be taken with safety?" [The best reply we can give to that is that we know of one instance where a silvered 3-gr. pill was taken three times a day for thirty years, and they never caused the slightest harm. It is quite possible that a person here and there could not do the same for three weeks without trouble arising. "What's one man's meat's another man's poison."]

7/50. *A. S.*—Ginger-wine.—See the 1894 DIARY, page 364.

201/53. *Inquirer*.—Indian Brandy.—See 1894 DIARY, 367.

8/71. *Dens* (Sheffield).—You can get experience in dentistry at some local dispensary surely. Make inquiry, and ingratiate yourself with the dentist who has the tooth-pulling to do. When you start helping him you should soon make progress. Read the article in our 1890 DIARY on "Dentistry for Druggists," and see our last Educational number, September 15, 1894, for the legal aspects of the matter.

8/69. *J. S.*—Elixir Sodii Bromidi et Calisayæ Comp.—There is no recognised formula for this. Use equal parts of each elixir, for which see page 16 of the first issue this year.

8/70. *L. L. S.*—A good chemistry book for one who has just passed the Preliminary examination is Ramsay's "Systematic Chemistry" (Churchill, 4s. 6d.), with Clowes and Coleman's "Qualitative Analysis" (Churchill, 2s. 6d.) for practical work. Oliver's "Lessons in Botany" (Macmillan, 4s. 6d.) is very good for a beginner, particularly because it takes him into the fields.

3/42. *R. A. W.*—We thought it had by this time become fairly well known that tr. quinin. ammon. does not mix clear with water. Quinine hydrate is precipitated. That is the objection to your prescription. Quinine acetate is also very sparingly soluble.

10/17. *Puzzled*.—Essential Oil of Almonds consists chiefly of benzaldehyde, and on keeping it becomes partially changed, benzoic acid being set free. The change is expedited in presence of moisture.

10/9. *Pater*.—You can Test for Tin in the tinned apple juice by adding some liq. hydrarg. perchlor. or sulphuretted hydrogen. In either case there should be no precipitate.

10/2. *Foot rot*.—Foot-rot Liquid.—Liq. antim. chlor. or liq. hydrarg. nit. acid. The following is also good:—

Cupri sulph. . . . . ʒiij.  
Acid. acetic. fort. . . . . ʒx.  
S.

10/24. *Crumpsall*.—All the published formulæ for Black-beer are impracticable, and we conclude that the makers are as careful of their secret as, say, Bass or Guinness.

11/64. *C. B. S.*—(1) Cough-electuary ("Veterinary Coun-Practice," page 24) half may be given to horses after breakfast and after the evening mash. (2) Neatsfoot-oil.—In making this the bones are removed from the trotters and calves' feet, and the soft portion subjected to steam heat. There is an art in the process, which it would be impossible to teach you in this column. Could you not visit an oil factory and see for yourself? Communicate with an oil merchant as to a market.

## INFORMATION SUPPLIED.

For this section we are always glad to receive from subscribers brief notes on practical subjects, recipes which have been found good in practice or which have required modification, and hints or fresh ideas on any pharmaceutical or trade matter.

Neuralgia-mixture, page 362, March 9. This formula should be:—

|                           |        |
|---------------------------|--------|
| Ammon. brom. . . . .      | ʒiiss. |
| Tr. gelsemii . . . . .    | ʒij.   |
| Tr. gentian. co. . . . .  | ʒiij.  |
| Aq. chlorof. ad . . . . . | ʒvj.   |

M.

Dose : A tablespoonful.

Sausage colouring.—I have noticed replies of yours re colouring of sausages in which you recommend aniline-dyes. The biggest makers, I believe, use an ammoniacal solution of carmine as more reliable—that is, less likely to change under the influence of heat and salt—and I myself have sold considerable quantities for that purpose.

BENONI. (14/9.)

## INFORMATION WANTED.

The Editor invites, on behalf of inquiring subscribers, postcard replies to the following:—

240/90. Photoxylin (nitrated wood pulp): where obtainable?

14/39. Zimocide: who are the agents or makers?

8/19. Makers of the following photographic goods:—Nylonite dishes, porcelain dishes, printing-frames and general woodwork, and metal racks, &c.

## Next Week.

Monday, April 1.

*Society of Chemical Industry (London Section)*, Burlington House. At 8 P.M. Dr. Carl Pieper of Berlin on "The German Patent Laws and their Relation to Home and Foreign Inventions."

*Society of Arts*, John Street, Adelphi, W.C. At 8 P.M. "Commercial Fibres," by Dr. D. Morris.

Tuesday, April 2.

*Royal Institution of Great Britain*. At 3 P.M. Professor C. Stewart on "The Internal Framework of Plants and Animals" (XII.).

Wednesday, April 3.

*Society of Arts*, John Street, Adelphi, W.C. At 8 P.M. "Sand-blast Processes," by Mr. John J. Holtzapffel, Assoc.M.Inst.C.E.

Thursday, April 4.

*Royal Institution of Great Britain*. At 3 P.M. Mr. E. B. Tylor on "Animism, as shown in the Religions of the Lower Races" (II.).

*Chemists' Assistants' Association*, 103 Great Russell Street, W.C. At 8.30 P.M. Musical and social.

*Liverpool Pharmaceutical Students' Association*. Mr. Jas. R. Burn on "Photo-chemistry."

*Glasgow and West of Scotland Pharmaceutical Association*. Annual business meeting.

Friday, April 5.

*Royal Institution of Great Britain*. At 9 P.M. Lord Rayleigh on "Argon."

Saturday, April 6.

*Royal Institution of Great Britain*. At 3 P.M. Lord Rayleigh on "Waves and Vibrations" (VI.).



**20 HIGHEST AWARDS.**

---

The Modern "Judgment of Paris,"

[Paris Exhibition, 1889.]

**GOLD MEDAL.**

**PEARS' Soap**

The only Gold Medal awarded

SOLELY FOR TOILET SOAP

at any International Exhibition in the world

*Representing the consensus of opinion  
of more than*

**100** Analysts or Soapmakers

the chief Experts of the world.



# BARRON, HARVEYS & CO.

GILTSPUR STREET, LONDON, E.C.,

beg to inform their friends and the Trade generally that, having purchased the Business of

**BARRON, SQUIRE & CO., BUSH LANE,**  
and also the various Formulæ of the Special Preparations of  
**JAMES BASS & SONS, HATTON GARDEN,**  
they are prepared to execute orders for the same, and pledge themselves to supply them in all their integrity.

*Specimens of these Preparations have remained in the Museum of Kew Gardens during 28 years without deterioration.*

## WILLIAM BURTON & SONS, BETHNAL GREEN, LONDON.

Hydrogen Peroxide, Indigo Extract, Orchil, Cudbear, Logwood Extract, Aniline Dyes.  
Sole Agents in United Kingdom and Colonies, excepting Canada, for

The New Bleach, **SODIUM PEROXIDE** (Aluminium Co., Ltd.).  
For Bleaching Wool and all Fibres. For Metallurgy, &c.

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Manufacturers of Granular Effervescent Preparations. We shall be glad to give specially favourable quotations, and to send samples of our superior Nos. 1, 2, and 3 qualities of **CITRATE OF MAGNESIA**.

Importers of Cod-liver, Castor, and Olive Oils; Extra Super Essence of Lemon and Bergamot, Otto de Rose, and all



Essential Oils; Valentia Saffron; Vanillas; Fruit Essences; Carmine, Aniline Dyes; Bees' Wax, &c., &c.

MANUFACTURERS of Very Superior Flexible Gelatine Capsules of Balsam Copaiba, Cascara Sagrada, Castor Oil, Cod-liver Oil, Santal Oil, and Bland's Pill Capsules, equal to 1, 2, and 3 pills. Samples and Lowest Quotations per 1,000, or in Boxes for Retail, will be sent on application from either the Wholesale or Retail Trade.

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**ACETIC ACID, P.B., ACETIC ACID FORT., SP. GR. 1-040**

**ACETATE OF SODA, COPPERAS,**

**PURE WOOD NAPHTHA, SULPHURIC ACID & CHARCOAL**

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**PEARL COATED PILLS.**

"Your pills I ever find  
Al in every way."

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Mr. Robertson's experience is in no way unique, but nevertheless serves to emphasize  
the truth of our re-iterated assertion that

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**PEARL COATED PILLS**



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# PRE-EMINENT!

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INCORPORATED 1891.

CENTENARY 1893.



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CHEMICALS FOR ANALYSIS—PHARMACY—PHOTOGRAPHY—  
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# MALT EXTRACT.

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*Bulked or Bottled, Prices on Application.*

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Are some of our chief Specialities. The quality of drugs in Capsules, especially SANTAL WOOD OIL is often so inferior that we have made a special study of these goods. None but the Finest Drugs are used in our factory, and we give a guarantee with every order despatched of the Purity of the goods.

# SANDAL WOOD OIL

Is the Drug on which we have made our name. We can only supply the Finest English Oil, however, as we have never bought an ounce of foreign oil since the foundation of our firm. We will

## PRINT YOUR LABELS FREE

of charge with the smallest sample order, as we know we shall keep your trade. Price Lists free on application.

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# "Premier" Ext. Malt.

ALSO IN COMBINATION WITH 25% OF  
**COD-LIVER OIL**

## Composition Essence

UNEQUALLED FOR ITS AROMA AND STRENGTH.

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## NEPENTHE.

**THE SAFEST AND BEST PREPARATION OF OPIUM.**

PRODUCES NEITHER HEADACHE, SICKNESS, NOR CONSTIPATION.

PREPARED EXCLUSIVELY FROM OPIUM.

Although many new hypnotics and analgesics have been recently introduced, NEPENTHE still holds its position as THE hypnotic and sedative *par excellence*. "Nepenthe" is registered under the Trade Marks Act, and is our sole property. No other preparation should be substituted when Nepenthe is ordered in a prescription.

Sent out in bottles bearing a label in white letters upon a green ground. We prepare also Double Strength Nepenthe, and Glycerole of Nepenthe (eight times the single strength) for hypodermic injection.

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## BEHRING'S DIPHTHERIA REMEDY

The Remedial Activity of Behring's Diphtheria Remedy is preserved for at least 12 months, according to the latest observations made.

The above can be had in all numbers, and also in the prophylactic dose, No. O, at the following reduced prices:—

|                                                                                |  |  |  |  |
|--------------------------------------------------------------------------------|--|--|--|--|
| (Yellow label) No. O, containing 200 Antitoxin normal units, at 9d. per phial. |  |  |  |  |
| (Green " ) " I, " 600 " " " 2/- "                                              |  |  |  |  |
| (White " ) " II, " 1,000 " " " 3/6 "                                           |  |  |  |  |
| (Red " ) " III, " 1,500 " " " 5/3 "                                            |  |  |  |  |

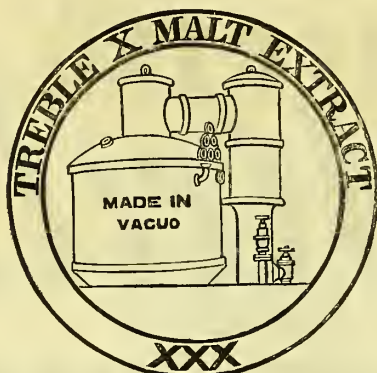
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UNEQUALLED IN DIASTATIC STRENGTH.

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# CURANILLO,

The only Safe, Certain, Reliable, Rapid  
Remedy for

**INFLUENZA, ASTHMA, BRONCHITIS,**  
AND ALL  
**LUNG TROUBLES,**

And a Potent Regulator of the LIVER and  
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Largely replacing the Mitcham Oil, 21/11.

Hydrobromic Syrup of Hypophosphites.

**LAC BISMUTHI.**

Fine quality, keeps well. 6/6 lb.

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## Soluble Pearl-Coated Pills.

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|---------------------------|-----|-----------------------------|---------|-----------------|--------------------|
|                           |     | Per Gross.                  | Per lb. |                 |                    |
| Pil. Aloes et Ferri, P.B. | ... | 1/6                         | 4/-     | Aperient (Mild) | ...                |
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|                           |     |                             |         |                 | 1/6 4/-            |
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## The "Colloid" Capsules.

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|-----------------------|-----|----------------|---------------------------|-----|----------------|
| Bals. Copaibæ, m.x.   | ... | 10/- per 1,000 | Ol. Santal. Flav. Ang.    | ... | 38/- per 1,000 |
| Creasote, m.i.        | ... | 10/6 "         | Pil. Blaud., grs. v.      | ... | 10/- "         |
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## Effervescent Preparations.

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|----------------------------|-----|-----|-------|----------------------------|-----|---------|
| Citrate of Magnesia (A)... | ... | 1/6 | 130/- | Antipyrine, grs. v. to 3l. | ... | 6/- lb. |
| " " (B)...                 | ... | 1/- | 75/-  | Caffein Cit.               | ... | 4/6 "   |
| " " (C)...                 | ... | 10  | 70/-  | Phenacetin                 | ... | 6/- "   |
| " " (D)...                 | ... | 9   | 65/-  | Sodii Sal.                 | ... | 3/- "   |

## "Bi-Conical" Horse Balls.

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|------------|-----|----------|-------------|----------------|-----|----------|-------------|
| Alterative | ... | 2/- Doz. | 21/- Gross. | Physic, 4 drs. | ... | 2/- Doz. | 21/- Gross. |
| Cough      | ... | 2/- "    | 21/- "      | " 5 "          | ... | 2/6 "    | 27/- "      |
| Diuretic   | ... | 1/9 "    | 18/- "      | Tonic          | ... | 2/- "    | 21/- "      |

## "A I" Compressed Tablets.

### SPECIMEN PRICES.

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|-------------------|-----|--------------|----------------------------|-----|-------------|
| Antipyrine        | ... | 54/- per lb. | Coc., Pot. Chl., and Borax | ... | 3 6 per lb. |
| Borax             | ... | 1/9 "        | Ipecac. c. Opio            | ... | 7/- "       |
| Cascara, grs. ii. | ... | 8/6 "        | Potass. Chlor.             | ... | 1/3 "       |

Also in 6d. and 1s. Screw-top Bottles, and in Bottles of 100 Tablets at Lowest Prices.

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# BICARBONATE OF SODA,

REFINED AND RECRYSTALLIZED.

PURE AND CHEAP.

## ANALYSIS.

|                        |     |     |     |     |     |       |
|------------------------|-----|-----|-----|-----|-----|-------|
| Bicarbonate of Soda    | --- | --- | --- | --- | --- | 97.20 |
| Mono Carbonate of Soda | --- | --- | --- | --- | --- | 1.90  |
| Sulphate of Soda       | --- | --- | --- | --- | --- | trace |
| Chloride of Sodium     | --- | --- | --- | --- | --- | .035  |
| Moisture               | --- | --- | --- | --- | --- | .82   |
| Insoluble              | --- | --- | --- | --- | --- | nil   |

# PURE ALKALI,

GUARANTEED 58 DEGREES.

EQUAL TO 98 PER CENT. OF CARBONATE OF SODA.

Most economical form of Soda for the use of Printers,  
Bleachers, Dyers; Glass, Paper, and Soap Makers.

## CONCENTRATED CRYSTAL SODA

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By far the Purest and Cheapest form of Washing Soda.

Only 1 lb. of Concentrated Crystal Soda required to do the work of 2 lbs. of Washing Soda.

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Also BLEACHING POWDER.

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*Manufacturers of Soda by the Ammonia Process,*

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Quotations and Samples  
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Manufacturing Chemists, Drug Grinders and Importers,

HORNCastle.

"ANGLO-NORWEGIAN"

# COD-LIVER OIL.

SEASON 1895.

This Cod-Liver Oil is pure, stands the cold without solidifying, and is quite sweet, with an agreeable odour of the fresh liver. It is the **FINEST** oil, with the least possible colour, taste, or smell.

An assortment of artistic Labels, with Chemist's Name and Address, free.

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Owing to misapprehensions as to the amount of morphine used in the preparation of

## Mrs. WINSLOW'S SOOTHING SYRUP,

we wish to state that the amount is one-eighth ( $1/8$ ) of one grain to a fluid ounce. As there are eight teaspoonfuls to an ounce, the amount of morphine in a teaspoonful, our maximum dose, is one sixty-fourth ( $1/64$ ) of a grain.

It will be seen that this is very much less than the quantity used in similar preparations authorised by the Pharmacopœia.

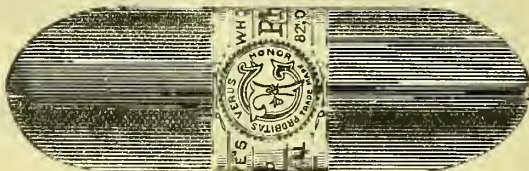
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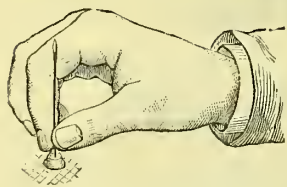
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GELATINE CAPSULED  
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Alterative, Condition, Cordial Cough,  
Diuretic, Fever, Physic, Worm, Quinine  
Tonic Balls (Registered 81,291).



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DR. WARLONT'S CALF VACCINE.

Tubes, 2s. each Half Tubes, 1s. each. Pomade in Vials, 5s.

HUMAN VACCINE from healthy children only, microscopically examined, and source quoted.—Three Tubes, two-thirds full, 5s.; Tubes one-third, 1s. each. Tubes two-thirds full (same as those mentioned above, but without source), in quantities for export, £5 per 100 tubes. PIN-POINTS (uncharged), 1s. per doz. VACCINE EJECTORS, 1s. 3d. each, including Postage. Office Hours, 10 to 4; Saturdays, 10 to 2.

P.O.O.'s (Including Postage, and crossed London and Westminster Bank), with orders, payable to EDWARD DARKE, Secretary.

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SILVER MEDALS —

Antwerp, 1894; Berlin, 1892-3

Dresden, 1894.

Prof. Dr. A. von Bardeleben, on Dec. 29, 1894, writes:—  
"According to my experience of many years, it is the best of all such salves."

INVALUABLE FOR CHAPS, BURNS, AND ALL SORES.

In tubes -7½, 1½, and 2/3.

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(From 30 % to 98 %),

YELLOW PRUSSIAN OF POTASH,

Nitrate of silver, Chloride of Gold,

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LIQUOR QUININÆ et STRYCHNINÆ PHOSPH.

1-7 PRO SYRUP. EASTONI. 1-7

will be reduced in price from 12/- to 10/- per lb.,

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LIQUOR EASTONI, 1 to 3,

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Chemists that contract to Unions, &c., and large consumers, will, by making their Syrups with

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SAVE TIME, LABOUR, MONEY, and ENDLESS WORRY!!!

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# "SOLAZZI."

"The Chemist and Druggist" says:—

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Recommended also by "Health," "Food and Sanitation,"

"Health News," &c., &c.

Ask your Wholesale House for Show Cards, Handbills, &c.



# DUTCH DROPS

(HARLEM OIL.)

With Dutch, English, French, German, Spanish, Italian, and Danish Wrappers.

EXPORTED BY

**J. & W. WEGMAN, AMSTERDAM (HOLLAND).**

SPECIAL QUOTATIONS ON APPLICATION.

## JACKS' PILLS

THE BEST FAMILY MEDICINE ON EARTH.

They cure Constipation, Biliousness, Indigestion, Fulness after Meals, Sick Headache, Heartburn, Flushings of Heat, Cold Chills, Depressed Spirits, Sleepless Nights, Liver Complaints, Palpitation of the Heart, Pains in the Back, all Nervous Disorders, &c. &c. For Females of all ages they will be found the best medicine on earth, never failing to cure all complaints and symptoms incident to the sex. With full directions. Price 9 $\frac{3}{4}$ d., 1/1 $\frac{1}{2}$ , and 2/3, from all Chemists, or direct from the Proprietor, **THOMAS JACKS, 8 St. George's Circus, LONDON, S.E. Small Pill, Pearl-coated, Tasteless.** All Chemists, Druggists, and Stores should stock these pills, which are being well advertised, and, as they are really good, are now in great demand.



Well Advertised Ready Sales.

**NORTON'S CAMOMILE PILLS**

Advertising Matter Showcards, framed or plain, sent on application.

NOTICE.—Messrs. Norton's other specialty "Godfrey's Extract of Elder Flowers," now supplied in 1-doz. Show Boxes.

NORTON'S LTD., 21 SPITAL SQ., LONDON, E.

## TOOTHACHE

FACEACHE  
NEURALGIA  
AND ALL  
NERVE PAINS

CURED INSTANTLY BY  
**"HERMANINE"**

A new and invaluable preparation, which meets with quick sale wherever introduced. "HERMANINE" gives universal satisfaction to both buyer and seller, and is highly recommended by purchasers.

LARGE PROFITS GUARANTEED.

Correspondence solicited from pushing houses publishing Price Lists.

Write for terms to the Wholesale Houses, or direct to  
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Artistic Show Cards, Tablets, and printed matter can be had on application to the above address.

# BEECHAM'S PILLS

**FOR ALL BILIOUS & NERVOUS DISORDERS,  
INDIGESTION, & FEMALE COMPLAINTS.**

The demand is unprecedented, and Druggists will find BEECHAM'S PILLS the most Saleable Patent Medicine in the Market.

## BEECHAM'S COUGH PILLS

As a Remedy for Coughs in general, Asthma, Bronchial Affections, &amp;c., these Pills stand unrivalled.

In Boxes, 9 $\frac{1}{2}$ d., 1s. 1 $\frac{1}{2}$ d., and 2s. 9d. each.

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All Chemists, Druggists and Stores should stock this new article, which is well advertised, and is a really good speciality. It is put up in collapsible tubes, Retail Price, 1s., and can be obtained from any Wholesale House.



# DR. J. COLLIS BROWNE'S **CHLORODYNE.**

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## IMPORTANT NOTICE TO CHEMISTS.

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This preparation does not contain any poison which is included in Part 1, Schedule A of the Poisons Act; therefore the signature of the purchaser is not required.

Chemists who study their own reputations should never be thoughtless enough to sell an imitation Chlorodyne.

Any first-class old-established Chemist will tell you that Dr. Browne's preparation is the only genuine Chlorodyne.

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SOLE MANUFACTURER—

**J. T. DAVENPORT,**  
33 GREAT RUSSELL STREET, W.C.



# HEARN'S BOTTLES

## ARE THE BEST IN THE MARKET.

BOTTLES, &c., of ANY SHAPE OR COLOUR, at the most Reasonable Prices.

HEARN, WRIGHT & CO. (Late E. A. Hearn & Co.) Wholesale & Export Glass Bottle Manufacturers, London, E. Eclipse Glass Works, Chatsworth Road, Clapton, London, E.

# DISPENSING BOTTLES, &c.

SHIPPERS OF THESE GOODS ARE INVITED TO SEND THEIR ENQUIRIES TO

## E. YOULDON (ESTABLISHED 1840)

EAST LONDON GLASS BOTTLE WAREHOUSE,  
36, 38 & 40 GREAT GARDEN STREET, LONDON, E.



# BOTTLES.

OUR NEW AND GREATLY ENLARGED

## Illustrated Price List

NOW READY. INSPECTION OF SHOW ROOM INVITED.

**JOHNSEN & JØRGENSEN,**  
Botolph House, 10 Eastcheap, LONDON, E.C.

## DISPENSING BOTTLES

With Rounded Edges. First-rate quality, sent washed and papered ready for use, at the following low prices:—

|               |     |     |                |
|---------------|-----|-----|----------------|
| 3 and 4-ounce | ... | ... | 8/- per gross. |
| 6 and 8 "     | ... | ... | 9/- "          |
| 10 and 12 "   | ... | ... | 12/- "         |
| 16 "          | ... | ... | 17/- "         |

EITHER PLAIN OR GRADUATED.

Six Gross, assorted or otherwise, sent Carriage Paid to any part of England; smaller quantities not carriage paid.

Please say, when sending order, that you wish them sent washed and papered; there is no extra charge.

**THE ISLINGTON GLASS BOTTLE COMPANY**  
(H. HARRIS & CO.),

153 Upper Thames Street, City, London.

Bankers—London and Westminster Bank.

Established upwards of 50 years.

All other kinds of Bottles at very low prices.

48

## DISPENSING BOTTLES.

**THE NORTH LONDON GLASS BOTTLE COMPANY**

(I. ISAACS & CO., Proprietors)

Beg to inform the Trade that they have made a further reduction in the price of their Bottles, as follows:—

The NEW SHAPE FLAT BOTTLES, with rounded edges, plain or graduated—

|              |                |                |                 |
|--------------|----------------|----------------|-----------------|
| 3 & 4 oz. .. | 7/6 per gross. | 10 & 12 oz. .. | 12/- per gross. |
| 6 " 8 " ..   | 8/6 "          | 16 " ..        | 16/- "          |

WHITE MOULDED PHIALS, plain or graduated Teaspoons—

|            |                |              |                |
|------------|----------------|--------------|----------------|
| 1/2 oz. .. | 3/6 per gross. | 1 1/2 oz. .. | 4/6 per gross. |
| 1 " ..     | 3/9 "          | 2 " ..       | 5/- "          |

PLEASE NOTE.

Six gross and upwards, assorted or otherwise, are carriage paid to any address in England; smaller quantities not carriage paid.

**I. ISAACS & CO., Glass Bottle Manufacturers,**  
106 MIDLAND ROAD, ST. PANCRAS, LONDON.

Established 50 years.

Bankers—London and Westminster Bank.



# ORIGINAL AND SUPERIOR ROUND-CORNERED DISPENSING BOTTLES GILBERTSON'S

(No. 118583)

ARE UNEQUALLED IN QUALITY AT PRICES CHARGED.

## SPECIAL NOTICE.

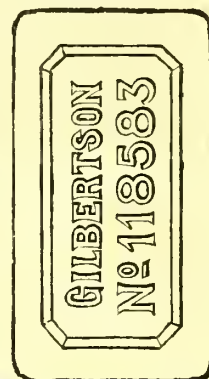


We particularly ask those friends for whom we have cut NAME PLATES to stipulate when ordering lettered bottles that Gilbertson, No. 118583, is on the bottom of each bottle, as we understand Travellers (other than our own) are offering to utilise our Plates, which is manifestly unfair to us, we having introduced and put on the market at great expense Dispensing Bottles with Rounded Corners now universally in use.

*Usual Discount. Crates Free. Carriage Paid.*

11 ST. ANDREW STREET, HOLBORN CIRCUS, LONDON.

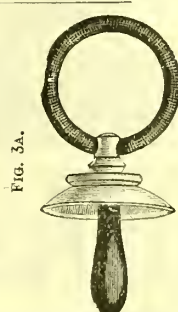
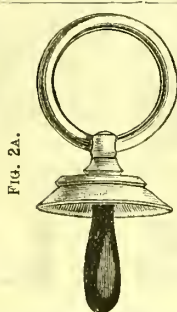
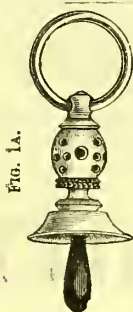
Telegraphic Address:—"FRANGIPANI LONDON."



BOTTOM OF BOTTLE.

## MARRIOTT'S PATENT 'THE LILY.' LATEST IMPROVEMENTS.

Figs. 1, 2, and 3, with Patent Unbreakable Ring and CONCAVE SCREW SHIELDS, TEAT and SHIELD SECURELY FIXED.



Retail at 6d. Other Patterns supplied as usual.

Wholesale and Shippers' Orders must be sent direct to  
**E. MARRIOTT & CO.**  
HASTINGS.

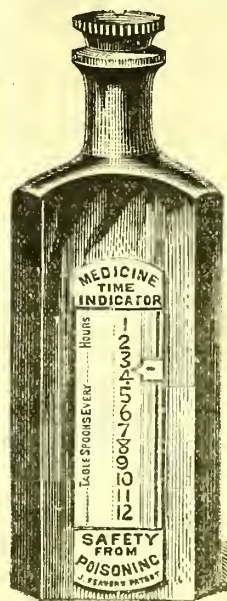
NOTICE.—THE PRINCIPAL PATTERNS of our 6d. BABY SOOTHERS are REDUCED to 4d. Revised Price List forwarded on application.

## A GOOD LINE FOR THE TRADE.

## MEDICINE TIME INDICATOR

And POISON PREVENTIVE.

This invention is for use on Medicine Bottles, for recording the time of last dose or when the next dose should be given. It also distinguishes medicine bottles from others containing poisons or preparations not intended to be taken. It comprises a label or tablet of paper, upon which is printed a series of numbers from 1 to 12 inclusive. A pointer is arranged in connection with the label so that it might be set opposite any of the numbers to indicate the time when a dose was last taken or when it should be next given. The label is gummed to or suspended from the bottle, or it may be placed in any convenient position in the patient's room if medicine for internal use only is being administered. It enables the patient or nurse to readily distinguish the bottle, thus obviating the liability to accidents, and is valuable for family use, by nurses in hospitals, for travellers, or for general use by Doctors and Chemists.



cate the time when a dose was last taken or when it should be next given. The label is gummed to or suspended from the bottle, or it may be placed in any convenient position in the patient's room if medicine for internal use only is being administered. It enables the patient or nurse to readily distinguish the bottle, thus obviating the liability to accidents, and is valuable for family use, by nurses in hospitals, for travellers, or for general use by Doctors and Chemists.

Special Terms to the Trade. Apply to the Patentee  
**J. FEAVER, 83 Croydon Rd., ANERLEY, S.E.**



## H. STATHAM & CO.'S POROUS RUBBER Elastic BANDAGES,

For the Cure of Ulcers and other Diseases of the Leg.  
With either Tapes or Elastic Button Fastening, in Grey or Black, made from the finest Para Rubber.

Sizes and Prices each, Carriage paid.  
5 ft. x 2½ in. wide 2/- .. x 3 in. 2/3  
7½ " x 2½ " " 3/- .. x 3 in. 3/6  
10½ " x 2½ " " 4/- .. x 3 in. 4/6  
15 " x 2½ " " 6/- .. x 3 in. 6/9  
21 " x 2½ " " 8/- .. x 3 in. 9/-

None genuine without Read. Trade Mark (a Human leg) stamped on every Bandage.  
Liberal discount to Chemists on application.  
New Illustrated Price List of India-rubber and Gutta-percha Articles of every description sent free on receipt of post-card.

SOLE MAKERS AND PATENTEES—

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## USE ONLY Codd's RINGS & WASHERS

FOR EVERY DESCRIPTION OF  
INTERNAL & EXTERNAL STOPPERED BOTTLES  
PLAIN OR LETTERED.

MANUFACTURED BY

**P. B. COW & CO.**

46 and 47 CHEAPSIDE, LONDON, E.C.

Works: STATHAM COMMON, S.W.

P. B. COW & CO. are the original manufacturers of INDIA-RUBBER RINGS for Patent Stoppers for Aërated Waters, and for many years supplied the late Mr. HIRAM CODD and his Agents exclusively. The quality of their manufactures is acknowledged to be the best in the market.

## A REAL CONVENIENCE.

### PILL BOX SHOOT.

"THE CHEMIST AND DRUGGIST" of Feb. 23, 1895, says:—

"The intention is that the shoot shall be hung on a wall. It only projects 2 inches, and is 37 inches long and 7 inches wide. When fully stocked it contains twenty-two dozens of various sizes of pill-boxes, each in a different receptacle, the size required being at any moment available. The apparatus will be found useful in any pharmacy where it may be fixed. The contrivance is well-made and has a neat appearance."

PRICE 10/6 EACH

REYNOLDS & BRANSON, 13 BRICCAT, LEEDS.

London Agents: MAW, SON & THOMPSON.



A combination of Camphor, Eucalyptus, and Coal Tar. A Powerful Disinfectant, Deodorizer, Insect Destroyer, and Air Purifier.

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SOLD BY THE PRINCIPAL DRUG AND SUNDRY HOUSES.

## HEBDEN'S CHLORIDE OF LIME

IN  
AIRTIGHT, ODOURLESS, WATERPROOF PACKETS  
Retains the Chlorine and keeps the Powder dry longer than any other packet.

4 oz., 8/- gross; 8 oz., 16/- gross; 16 oz., 30/- gross.

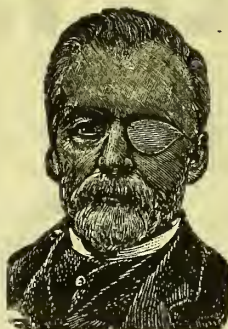
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MANUFACTURED ONLY BY

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Albany Works,

## Harrison's Featherweight Eye Preservers & Reading Shades



Court Journal says of them—"They are a perfect gem of beauty, lightness, and utility."

**XYLONITE EYE CAPS**

(Concave). Rights and Lefts.

Flesh Coloured.

Stop out the Light and Cold without Touching the Eye

Of MAW, SON & THOMPSON,  
And all Sundriesmen,

And T. H. HARRISON, 40 Hatton Garden, London, E.C.

# THE SURGEON'S LINT,

V.B. QUALITY.

The superior quality of Newsome's Absorbent Surgeons' Lint is universally admitted. The V.B. quality is quite pure and of great superficial area and exquisite softness. The C, D, E, and F qualities are equally pure and absorbent; E is stronger in fabric.

**NEWSOME'S BLEACHED ROLLED BANDAGES, 3 in., 2½ in., 2 in. Also SURGICAL ABSORBENT OPEN BANDAGES.**

Specially Bleached & Grey Carded Cotton Wools, Absorbent & Bleached & Grey Waddings; also Sheet Waddings, Tow, &c.

THE TRADE SUPPLIED, THROUGH THE LONDON AND PROVINCIAL WHOLESALE HOUSES, OR FROM

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London Agents—B. PRATT & CO., 1 Wood Street, E.C.

Telegraphic Address—"Newsome, Ancoats, Manchester."



# THE SUSPENSORY BANDAGE

TO RECOMMEND IS THE

## “SYRACUSE,”

With Self-Adjusting Loop at Back of Pouch.

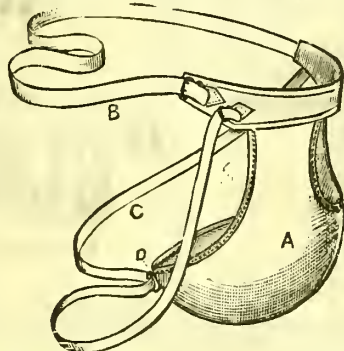
(PATENTED IN ENGLAND.)

**HAS THE LARGEST SALE  
OF ANY SUSPENSORY BANDAGE  
IN THE STATES.**

3 SIZES—Large, Medium, and Small.

Made in Seven Qualities, to suit all  
Markets.

Each Bandage is carded separately, with  
Printed Guarantee.



Each Bandage bears a Guarantee  
to give satisfaction to wearer, or  
money returned at our expense.

### COTTON POUCHES.

|         |     |              |
|---------|-----|--------------|
| Nos. 10 | 16  | 21           |
| 6/6     | 12/ | 18/ per doz. |

### SILK POUCHES.

|         |     |     |              |
|---------|-----|-----|--------------|
| Nos. 28 | 31  | 34  | 38           |
| 24/     | 30/ | 48/ | 72/ per doz. |

We call attention to the fact that our Bandages are advertised in all the leading Athletic papers, and are largely used by Athletes of all kinds. We would strongly recommend all Chemists who require a first-rate Bandage, and who wish to give satisfaction to their Customers, to hold stock, which will enable them to supply our Bandages when asked for.

May be obtained from all leading Druggists' Sundries Houses throughout the Country, or from the

**WELLS MANUFACTURING CO. (H. C. Quelch), LUDGATE SQUARE, LONDON, E.C.**



REGISTERED.

The Original Make of Fleecy Stockinette

## CHEST PROTECTOR

INTRODUCED and MANUFACTURED by

**THE LIVERPOOL LINT CO., LIVERPOOL.**

The "HEALTH" PROTECTORS are equal in SIZE and SUPERIOR  
in Quality, Workmanship, and Weight to all other makes.

BEFORE PLACING ORDERS WRITE FOR SAMPLES FOR  
COMPARISON ON THESE POINTS.

# A HINT FOR '95.

Chemists who have made up their minds to turn over a new leaf this year will do well to let that leaf be in the New Catalogue of DRUGGISTS' SUNDRIES and SURGICAL INSTRUMENTS just issued by F. SCHUTZE & CO. In it are nearly 200 leaves: each one will pay to turn over and mark its contents.

*It will be sent to any Chemist on application.*

**F. SCHUTZE & CO., 36<sup>A</sup> ALDERSGATE ST., E.C.**



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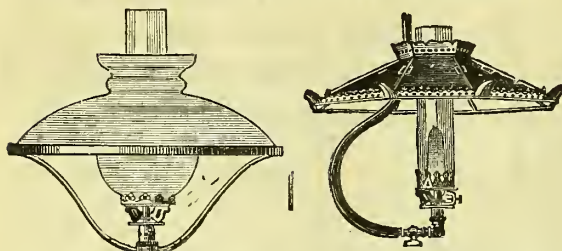
(WELSBACH SYSTEM).

TREBLE THE LIGHT WITH HALF THE GAS  
OF ORDINARY GAS BURNERS.

SUPERIOR TO ELECTRIC LIGHT

At One-eighth the Cost.

Can be attached to Existing Gas Fittings.



BRILLIANT, COOL, SOFT, STEADY LIGHT.

THE LIGHT for HOME or BUSINESS.

Full particulars Post Free on application to the  
Incandescent Gas Light Co., Ltd.

PALMER ST., WESTMINSTER, LONDON.

BRANCHES AND AGENCIES THROUGHOUT THE KINGDOM.

# PALMER'S NEW PATENT NIGHT LIGHTS. "VENUS"

For Burning in Glasses without Water.

# "GLOW WORM"

For Burning in Saucers with Water.

BOTH ARE PERFECTLY

Safe, Clean, Reliable,

AND

CONTAIN NO GREASE.

SOLE PATENTEES AND MANUFACTURERS,

PALMER & CO., LTD.,  
STRATFORD, LONDON, E.

# BOORD & SON,

DISTILLERS, FOREIGN WINE AND SPIRIT MERCHANTS, AND METHYLATORS,

ALLHALLOWS' LANE AND BARTHOLOMEW CLOSE, LONDON, E.C.

Quotations for S.V.R. Methylated Spirit and Finish on application.

FINEST ORANGE WINE FOR QUININE.

JAMES  
BURROUGH

FINE PORT without Tannin  
FINE SHERRY for Medicinal Uses, &c.  
FINE MALAGA for Steel Wine, &c.  
FINE BURGUNDY for Invalids  
S.V.R. and Methylated Spirit at lowest present prices

CALE STREET  
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All at Lowest Prices and  
specially recommended.

CHELSEA.

# S. V. METH.

JONES & COMPANY,  
COPPERFIELD ROAD,  
LONDON, E.

LARGEST MAKERS IN THE KINGDOM.

We are prepared to supply METHYLATED SPIRIT in  
5-gallon quantities at Lowest Prices.

REDUCTIONS TO LARGE BUYERS.

SAMPLES FREE.



# EDWARDS' "HARLENE" FOR THE HAIR

*HAS THE HIGHEST HONOURS*

AND

# LARGEST SALE IN THE WORLD

**OF ANY PREPARATION FOR THE HAIR.**

New and handsomely framed Show Cards in Twenty Colours (size 24 by 16) will be forwarded free of charge to all retailers of our "HARLENE," together with 1,000 Counter Bills with seller's name and address printed at foot, on application.

*Full discount of 20 per cent. off the trade prices to all buyers of £5 and upwards.*

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EDWARDS' "HARLENE" COMPANY, 95 HIGH HOLBORN, LONDON, W.C.

FREDK. FINK & CO.

10 & 11 MINCING LANE, LONDON, E.C.

SPECIALITIES: Glycerine — Gum Arable —
Gum Tragacanth—Pure Beeswax—Honey.

THE "MORSTADT" Cachets

Are the most digestible, flexible, and elegant in the market, and are fast replacing all competitors. The Cachets are made to hold from 3 to 184 grains Quinine or Salicylic Acid.
"MORSTADT" OACHET CLOSING APPARATUS, to easily and speedily close 12 Cachets at one operation, from 12/- to 30/-.
SMALL APPARATUS, to fill and close 1 Oachet at a time, from 2/8 to 6/8.

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CINCHONA BARK AND CRUDE DRUGS.

SPECIALITIES OF
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PRICES AND SAMPLES ON APPLICATION.

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CHEAPEST HOUSE FOR THE FOLLOWING:—

Pot. Bromide	Sugar of Milk
Do. Iodide	Acid Boracic
Do. Permanganate	Iodoform
S.V.R. in 40-gallon drums, pure tinned.	

JUNE'S HEALTH BATH SALT

A new refreshing and invigorating preparation which meets with a ready sale wherever introduced.

GOOD PROFIT GUARANTEED.

WRITE FOR SAMPLES & TERMS,

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E. H. THIEILAY'S (Registered 1867)
EAU F. JOUVENCE, GOLDEN.

Producing Flaxen Golden Hair.
Gold Medal, PARIS, 1867. PHILADELPHIA, 1876.
This is a very superior article. In Bottles at 3/6, 6/6, & 10/-
All Wholesale Houses, or direct from

E. H. THIEILAY

Parfumeur-Chimiste, Amersham Park, New Cross, LONDON S.E.
(SHOWROOMS AT CHABING CROSS HOTEL.) [3]

DENTISTRY! DENTISTRY!!

Mechanical Dentistry for the Profession. In Gold, Dental Alloy, Vulcanite Tubes, Celluloid, Gum Section.
Repairs. Implicit Attention to Instructions. Best Work and Materials and Punctuality Guaranteed, and Lowest Charges.

FENTIMAN & CO., Dentists, 2 Upper East Smithfield, London.
[e only Address.] Please note down Address and Name. [Established 1835.]

**IN COLLAPSIBLE TUBES, BOXED.**Sample Dozen **8/-** Carriage Paid.

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Madame Georgina Burns,
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BLACKBURN, Eng Sample Tube 1/- Post Free

GLENDENNING'S BEEF AND MALT WINE.

THE FINEST PREPARATION OF THE KIND IN THE MARKET.

Prices and terms on application. Agents appointed.

W. GLENDENNING & SONS, Importers of Special Wines for Invalids,
9 GRAINGER STREET, NEWCASTLE-ON-TYNE.
Established 1867.

Invaluable
for
Cyclists,
Footballers,
Golfers,

RYPONA

For Rheumatism, Lumbago, Sciatica,
Sprains, &c.; also for Cuts, Wounds,
Boils, and Skin Affections.
Of all Chemists and Patent Medicine
Vendors.
Liniment, 1/1 & 1/8; Ointment, 7/6.
Wholesale of

Athletes,
and
anyone
liable to a
Chill.

J. SANGER & SONS, 2 Winsley Street, LONDON, W.
See page 46 (bottom folio) of "The Chemist and Druggist," December 1, 1894.

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Highest Award World's Fair, Chicago, and Four Gold Medals.

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ARE THE Time & Instantaneous
SIMPLEST & BEST. SHUTTERS

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Time & Inst., from 15/6; Snap Shot, from 10/-; Focal
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THE THORNTON-PICKARD MFG COMPANY,
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TRADE MARK.

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72 MANSFIELD ROAD, N.W.,
SOLE PROPRIETOR AND MANUFACTURER.

Registered—No. 2745

Special Terms to Wholesale Houses for Sheet or Sticks stamped with their own name.
A sample box of 3d. sticks sent post free for 12 stamps. Price list and sample free.

KNEIPP—MALT—COFFEE OF THE KATHREINER COMPANY.

The best Breakfast Beverage. Invaluable for Invalids, Convalescents, and all delicate people. Strongly recommended for all nervous complaints.

Price 7/6 per dozen Pound Packets.

Agent for Great Britain—

W. ERHARDT, of 7 Bury Street, Bloomsbury, London, W.C.

BENNETT & JENNER, STRATFORD, LONDON

SPECIALITIES:

Acid, Sulphurous	Caramel (Colouring)
Calcium Bisulphite	Solid and Liquid.
(Special for Export, s.g. 1100).	Hydrogen Peroxide
Calcium Sulphite	(Special for Export).
„ Chloride, Pure	Sodium Bisulphite
	„ Sulphite

PROFITABLE EXTRAS FOR CHEMISTS.

“MIXED PARCELS.”

Every requisite for Smokers in One order. Maximum of profit—Minimum of trouble.

Send Postcard for Illustrated Price List (60 pages) free.

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Manufacturing Chemists, &c.

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Keen Buyers of all CHEMICALS, DRUGS, and
SUNDRIES should write for Quotations.

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(REGISTERED).

THE ABSOLUTE PREVENTATIVE OF SEA SICKNESS.

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SPONGE IMPORTERS.

M. PETERSON & CO.

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LAKE MILLAR'S INFECTION KILLER.

PRICE 2d. EACH.

Handsomely put up in Glass-top Cases.

Sample Case post free for 3/- of

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Thousands
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Repeat orders
from every
customer.
Give it a trial.
Money
refunded with
pleasure
if you are not
satisfied.



KOMCHACIN CALORIC

Has for Twenty Years Cured

PILES, HEMORRHOIDS, AND FISSURE.

As this Remedy is now being extensively advertised,
Chemists should write for particulars to Central
Depôt for the United Kingdom,

23 The Pharmacy, Allerton, Bradford, Yorks.

Manager—A. A. KNIGHT, Chemist.

WATSON & WATSON'S

93, LEADENHALL ST. CELEBRATED LONDON, E.C.

HOMOEOPATHIC MEDICINES

KNOWN THROUGHOUT THE WORLD

SEND FOR

New Illustrated Price List.

New Illustrated Price List.

New Illustrated Price List.

PATENT PARCEL POST BOXES.

A Perfectly Cushioned Box, suitable for any description of

GLASS BOTTLES OR FANCY GOODS.

SPECIAL CUSHION, SILK LINED, for HIGH-CLASS GOODS.

LOOSE OR HINGED LID BOXES OR TUBES.

Set of 6 Hinged-lid Cushioned Boxes for Bottles 4 oz. to
16 oz., 1s. 3d., post free.

Special set of 6 for Fancy Goods { Plain, 1s. 3d., post free.
Fancy, 2s. 6d. „

Quotations for quantities, Plain or Printed, per return post.

ORDERS PROMPTLY EXECUTED.

G. C. KIRTLEY, Printer and Box Maker,
3 Elswick Court, NEWCASTLE-ON-TYNE.

STOKES' CASH TILL.

Reduced Price **55/-** Latest Improvements.

(Sent on Trial seven days, on receipt of two references.)

Particulars and Testimonials on application.

G. R. STOKES & CO., LTD.,
HANLEY, STAFFS.



25-LB. TINS. 2 TINS IN CASE.

THE CHEMIST AND DRUGGIST says:—

"The oil is free from low-boiling terpenes, has a specific gravity of 0.9075, and has a delightful odour."



KANGAROO EUCALYPTUS OIL

Is admitted to be the Purest Eucalyptus Oil yet introduced to the public.
To be obtained of your Wholesale Druggist.



SOLE CONSIGNEES—
LAUGHLAND, MACKAY & BAKER, 50 Lime St., LONDON.

COLONIAL ADDRESS—
A. M. BICKFORD & SONS, Wholesale Druggists, 46 Currie Street, ADELAIDE.



OIL OF
EUCALYPTUS
GLOBULUS
"PLATYPUS BRAND"



TASMANIAN EUCALYPTUS OIL CO.

138 LEADENHALL STREET, LONDON, E.C., and HOBART, TASMANIA.

PETROLEUM JELLY

WHITE, RED AND YELLOW
TRADE MARK
CONFORMS TO ALL REQUIREMENTS OF B.P.

AND PRONOUNCED BY THE MEDICAL PROFESSION TO BE UNSURPASSED.
Extract from Analytical Report of Dr. S. Rideal, F.C.S., F.I.C., F.G.S., Jan. 3rd, 1895.

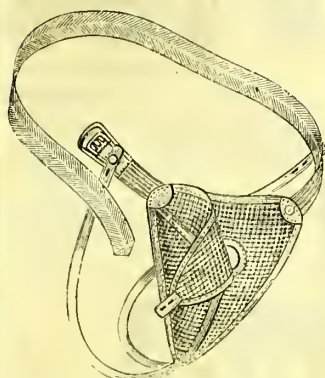
"Practically free from any taste, and no traces of any free acid, * * * are high-class Petroleum Jellies."

SNOWDON, SONS & CO., MILWALL, LONDON, E.

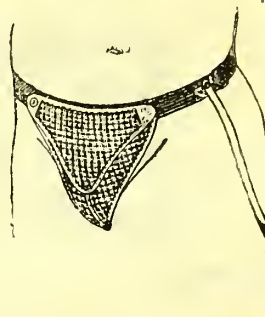
Perfect Protection & Safety!

THE

DOMEN "STOW-AWAY" SUSPENSORY BANDAGE



IS AN ENTIRELY NEW PATTERN AND A
GREAT IMPROVEMENT ON THE OLD
SUSPENSORY BANDAGE.



INDISPENSABLE FOR RIDING, CYCLING, &c.

FULL PARTICULARS SENT BY

"DOMEN" BELTS COMPANY

WHOLESALE WAREHOUSE, 61 MOOR LANE, LONDON, E.C.

All kinds of **BELTS** are supplied by the
"DOMEN" COMPANY. Full Illustrated Price List
sent Post Free.

ORANGE QUININE WINE.

When made with **Dowden's Seville Orange Wine** (detannated), this article no longer gives either trouble or unsatisfactory results. The Quinine should be added in the usual way, in any convenient closed vessel, and allowed to settle a few days, when the wine will be found **Brilliant** without filtration, and will so remain permanently after bottling. See opinion of Editor of THE CHEMIST AND DRUGGIST in Winter Issue, page 150.

Ask for Samples and state quantity to quote for.

DOWDEN'S ORANGE WINE.

DOWDEN & CO., Limited, ST. PAUL'S DISTILLERY, BOURNEMOUTH.

BOTWRIGHT & GREY

MANUFACTURING OPTICIANS,

(WHOLESALE AND EXPORT ONLY)
CLERKENWELL, LONDON, E.C.

Bombay Office—S. H. North & Co., 29 Forbes St. Sydney Office—Lion & Mosely, Wynyard Building, Wynyard Sq.

Spectacles and Eyeglasses in all metals, Spectacle and Eyeglass Cases, Field, Marine and Opera Glasses, Telescopes, Barometers, Thermometers, &c., Eyeglass Chains and Cords. We invite the inspection of intending purchasers.



Repairs, Odd Orders and Surgeons' Refraction Prescriptions accurately prepared by return of post. Special attention is given to Chemists commencing, and instruction is given in Sight Testing by one of the principals if desired.



Manure
by Special Appointment



Manufacturers
to Her Majesty the Queen.

UNIFORM STRENGTH AND QUALITY GUARANTEED.

(NON-POISONOUS.)

FLUID & POWDER

(NON-POISONOUS.)

Disinfectants

UNEQUALLED FOR DOMESTIC USE.

Testimonials and Evidence of Value on application to the Secretary

ODAMS' MANURE & CHEMICAL CO., LIMITED,
116 FENCHURCH STREET, LONDON, E.C.

WILEY'S CHEMICAL ESSENCE
FOR
LAMENESS IN HORSES.

HANDBILLS, WITH NAME & ADDRESS, SUPPLIED GRATIS.
50 YEARS' UNBROKEN SUCCESS.

SOLE MAKER AND PROPRIETOR, FRANCIS E. ROOKLEDGE, CHEMIST, EASINGWOLD, YORK.
TO BE HAD OF USUAL WHOLESALE HOUSES.

FLETCHER'S



**GOVERNMENT
CONTRACTORS.**

CARBOLIC ACID (pale 97 per cent. or crude) in 5, 10, 20, or 40 gallon lots. Carriage paid. Packages free.

CARBOLIC POWDERS from 5 per cent. to 25 per cent.

DISINFECTING FLUID (soluble), as used by Town and District Councils, Hospitals, &c. Highly recommended by Dr. W. Collingridge and other eminent authorities. Supplied in bottles, tins, drums, and casks.

SHEEP DIPS (fluid, powder, paste). Acknowledged to be the finest ever offered. Packed or in Bulk.

SPECIAL TERMS TO LARGE BUYERS.

English and Foreign Agents Wanted.

FLETCHER BROS. & CO., GRIMSBY.

58

**'THE MOST POWERFUL GERM DESTROYER AT
PRESENT KNOWN TO SCIENCE.'**

IZAL

DISINFECTANT (Non-poisonous).

Now
supplied by the chief
Wholesale Houses.

Show Cards.

Pamphlets,

Printed Matter,

And any information
the Trade may require,
can be obtained on
application to

Allen & Hanburys,
BETHNAL GREEN,
LONDON,

Who are the Sole Bottling
Agents for the Manufac-
turers.

Another Seed Story.

AND it's true—according to the books. Meissonier, the great French painter, was a passionate lover of flowers, and his head gardener was considered one of the highest living authorities on Seeds at that time. One day Meissonier was boasting to two gentlemen of the cleverness of this gardener, saying that it did not matter what seed was put before him, but he could identify it. The two gentlemen made up their minds to try him, and procured for the purpose the hard roe of a herring, which they carefully dried and rubbed into imitation seeds. These they put into a neat seed pocket, and again called upon the great painter, who sent at once for the gardener. The packet of so-called seeds being put before him, he carefully examined them, and mentioned some outlandish botanical title as being the likely name, but thought it would be better to try them in the hothouse first, if the gentlemen would come in a fortnight's time. So it was left until the appointed time arrived, when all four assembled together and proceeded to the hothouse. A series of small pots were then shown by the gardener, each one covered with a smaller pot. As they neared them, the gardener knocked off the top pots and revealed a row of fish-heads just coming through the soil. A label bore the words "Herenga Vulgaris," and the gardener said, "Gentlemen, they have come up *true to name*." Of course Meissonier stormed and furied, and sacked his gardener, and forgave him the next day—for who could blame him long?—and all ended happily.

We claim on behalf of the "Winged Lion" Penny Packets of Seeds that they will come up TRUE TO NAME. Many people say, "How can you put in Penny Packets expensive seeds like Crown Aster, Camellia Flowered Balsam, Carnation, Musk, Tobacco Plant, Brompton Stock, &c.?" We claim to do so, and to supply the Best Obtainable Seed of New Growth, and in quantity sufficient in every case to bring forth a Plentiful Supply of Flowers or Vegetables, as the case may be.

Chemists will do well to stock and push our Brand of Seeds. They will give satisfaction, and yield a handsome profit, at the same time making a bright and attractive show. With orders for 5 gross and upwards we send, free, a beautifully printed showplate, and with all orders a good supply of window-bills and pamphlets are forwarded.

Kindly send us your address, so that we may have the pleasure of forwarding lists and samples.

POTTER & CLARKE.

Artillery Lane,
London, E.

KEENE AND ASHWELL

MANUFACTURING HOMŒOPATHIC CHEMISTS,

74 NEW BOND ST., LONDON.

**PILULES,
TINCTURES,
CAMPHOR
PILULES AND
TINCTURE,
CAMPHOR
(Dr. Rubini's Formula),
EXTERNAL
TINCTURES.**

1/-

Size,

3/6

per doz.

Special Terms for
1 gross Parcels.

N.B.—CHEMISTS SHOULD BE CARE-
FUL TO STOCK THE MEDICINES
OF QUALIFIED HOMŒOPATHIC
CHEMISTS ONLY.

This Handsome Case PRESENTED, FREE OF CHARGE,
with £3 3s. worth of Homœopathic Medicines, viz.,
18 dozen 1 = Assorted Saleable Stock.

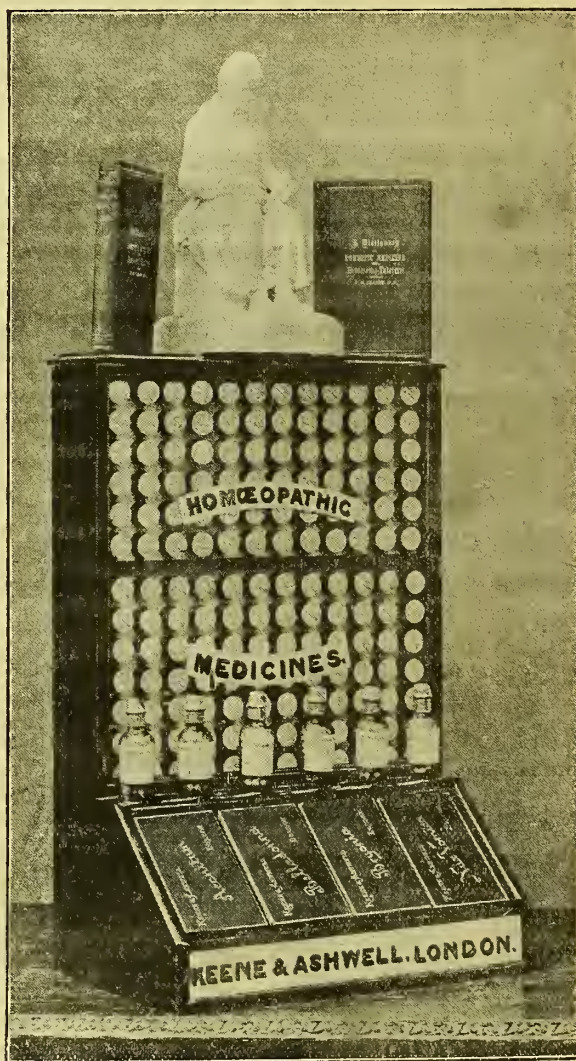


**CAMPHOR
PILULES.
CAMPHOR
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CAMPHOR
PILULES.**

3/6

Per dozen.

Special Terms for
gross Parcels.



Similar Case, to hold 30 dozen, PRESENTED FREE for £5.

MAY, ROBERTS & CO., LONDON,

Have been appointed EUROPEAN AGENTS for

THE WARREN CAPSULE CO.,

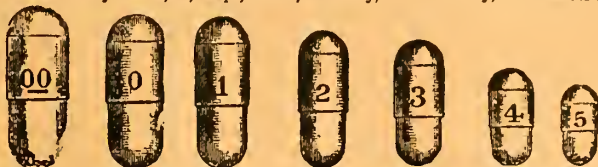
MANUFACTURERS OF

EMPTY GELATINE CAPSULES,

Corner Sixteenth and Baker Streets, DETROIT, MICH., U.S.A.

The Capsules made by us are perfect in uniformity of size, fit, shape, colour, elasticity, and solubility, and number from 5 the smallest, to 00 the largest.

Our Improved Process of manufacture and inventions of New Machinery enable us to put our goods on the market unexcelled, and at a less cost than has hitherto been done. They are made of the very Finest French Gelatine, and will stand in any climate.



Seven sizes, in Boxes of 100. Per box, 4d.; per doz. boxes, 3s. 9d.

CAPACITY.

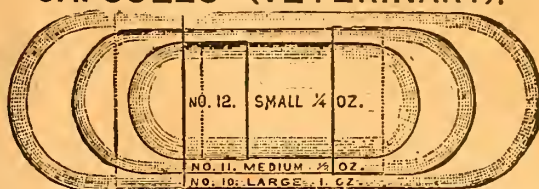
The approximate capacity of empty capsules will vary in the weight of different samples of the same powdered drug or alkaloid, according to the degree of compression exerted in filling.

SEE ANNEXED TABLE.

Size	00	0	1	2	3	4	5
Quin. Sul. .. gr.	8	6	4	3	2	1½	¾
Quin. Mass. .. gr.	16	12	8	6	4	3	1½
Pulv. Ipecac. Oe... gr.	12	8	6	4	3	2	1
Pulv. Aloes .. gr.	10	7	5	4	3	2	1
Bism. Sub Nit. .. gr.	20	14	10	8	6	4	2
Salicin .. gr.	10	7	5	4	3	2	1
Pulv. Rhel .. gr.	12	8	6	4	3	2	1
Aoid. Salicyl. .. gr.	8	6	4	3	2	1½	¾

RECTAL SUPPOSITORY CAPSULES (EMPTY).**THREE SIZES.**

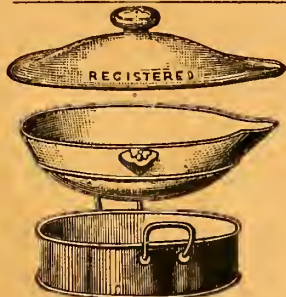
In boxes containing 100, one size, per box ... 4d.
 " " " per dozen boxes 3/9

CAPSULES (VETERINARY).

For administration to horses and cattle, or may be filled with absorbent cotton saturated for vaginal medication.

No. 10, large (ounce), in boxes of 10, per dozen boxes .. 8/-
 No. 11, medium (½-ounce), in boxes of 10 .. 6/6
 No. 12, small (¼-ounce), in boxes of 10 .. 5/6
 No. 10, bulk, per 1,000 .. 52/-
 No. 11 " " .. 47/-
 No. 12 " " .. 42/-

We supply the medium size in absence of specification.

**"MAY-ROBERTS" WATER BATH (REGISTERED).**

This Water Bath will supply a long-felt want amongst Chemists and Perfumers where small quantities of materials have to be dealt with.

The old form of Water Bath necessitates the use of a second vessel for pouring the melted Pomade Cream, or other substance into the bottles or jars in which they are sold. In the "MAY-ROBERTS" Water Bath the earthenware bowl can be lifted out of the tin containing the boiling water, the process of cooling being thereby very much expedited, and the contents can be poured into the bottles or jars direct from the bowl. The Bath is also supplied with an earthenware cover.

1-PINT .. 3/- each. 5-PINT .. 5/6 each. 10-PINT .. 9/6 each.

MAY, ROBERTS & CO., LONDON E.C.

BUYERS ARE CAUTIONED TO SEE THAT THEY GET THE

GENUINE DR. JOHN HOOPER'S PILLS,

Which may be known by the Name of the Inventor being on the Government Stamp.

MAY, ROBERTS & CO., LONDON, E.C.

AMERICAN BUYERS are particularly Cautioned.

1,000 Handbills, with Name and Address, sent Carriage Paid on receipt of Business Card.

Cadbury's Cocoa

ABSOLUTELY PURE
therefore BEST.

Cadbury's is "The Typical Cocoa of English Manufacture, Absolutely Pure."—*The Analyst*.

NO CHEMICALS USED IN CADBURY'S AS IN THE SO-CALLED PURE FOREIGN COCOAS.

Apollinaris

Hunyadi János

Friedrichshall

NATURAL MINERAL WATERS.

Single Cases Delivered in London, and, at the Same Prices,
Carriage Paid, to any Railway Station.

APPLY TO

THE APOLLINARIS COMPANY, LIMITED, 4 Stratford Place, Oxford Street, London, W.

The Chemist & Druggist

SUPPLEMENT.

Businesses Wanted
Businesses for Disposal
Premises to Let
Auction Sales

SATURDAY, MARCH 30, 1895

Partnerships
Situations Vacant
Situations Wanted
Miscellaneous

A Copy of this Supplement is inserted in every number issued of "The Chemist and Druggist."

THE CIRCULATION OF THE SUPPLEMENT THIS WEEK EXCEEDS 14,000.

CHEMISTS' TRANSFERS.

MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.

CHEMISTS' TRANSFER AGENTS,

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

The business conducted by Messrs. ORRIDGE & Co. has been known as a Transfer Agency since the year 1848, and is well known to all the leading firms in the Trade. VENDORS have the advantage of obtaining an opinion on value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment. PURCHASERS who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

1.—£1,300.—LONDON.—Wholesale Business; very old-established; select trade; requires no traveller; present returns £1,300 yearly; net profit, 25 per cent.; good business premises and residence; full investigation permitted; about £1,000 required.

2.—£600.—LONDON (Suburban).—Retail, Dispensing, and Prescribing Business, situate in busy and increasing neighbourhood; returns present rate between £500 and £600 yearly; gross profits about half; double-fronted shop, nicely fitted; convenient house, with garden; moderate rent; on lease; about £500 required.

3.—£700.—NEAR LONDON BRIDGE.—Dispensing and Retail Business; all profitable good trade; returns £700; situate in a large thoroughfare; the position offers a good opportunity to an energetic man; £525 required.

4.—£580.—LONDON (Eastern Suburb).—Ready-money Retail and Prescribing Business, situate in main thoroughfare; returns last year £580; plenty of room for extension; very good profits; well-fitted shop; single-fronted; capital house, private entrance; moderate rent on lease; price £300, or valuation.

5.—£600.—LONDON (near the City).—Retail and Prescribing Business, chiefly ready money; returns under management £600 yearly; well-fitted shop, single-fronted, plate-glass; comfortable residence and garden; held on lease; about £400 required.

6.—£800.—LONDON, S.E.—For disposal, middle-class Retail and Dispensing Business; position good; returns between £700 and £800 yearly; profits good; the shop is well fitted and stocked; capital house, on lease; price about £700.

7.—£400.—LONDON, W.C.—Dispensing and Retail Business; returns present rate £400; can be largely increased; single-fronted shop, position good, expenses small; price about £250.

8.—£800.—GLOUCESTERSHIRE.—An old-established Business, mixed; returns present rate between £800 and £900 yearly; the house is large and convenient; held on lease; moderate rental; valuation terms can be arranged; full particulars on application.

9.—£1,200.—BEDFORDSHIRE.—For disposal middle-class Retail and Dispensing Business; situate near the railway station; large and important town; returns, present rate, between £1,100 and £1,200; no heavy trade; nicely-fitted shop; small house; moderate rent; price required £750.

10.—£400.—SOUTH OF ENGLAND.—Retail and Prescribing Business, middle class; situate in busy market thoroughfare; returns present rate about £400, increasing; the shop has single front; good working stock; capital house, with private entrance; price £250, part can remain.

11.—£550.—SOUTH COAST.—Old-established Business, situate in a fashionable town and health resort; returns average over £550 yearly, and every facility for a considerable increase; comfortable house, warehouse, &c.; price £500; full particulars on application.

12.—£1,000.—WALES.—Shipping trade; situate in a rising town; population rapidly increasing; returns present rate over £1,000; very good position; main street; convenient house; low rental; price to an immediate purchaser £320.

13.—£1,300.—WEST OF ENGLAND.—For disposal Mixed Business; returns about £1,300 yearly; profits good; fairly well-fitted shop, double-fronted; commodious house; moderate rent, on lease; price £900, or valuation; terms can be arranged.

14.—£1,000.—HERTS.—Mixed Business, very old-established; returns over £1,000 yearly; profits good; the shop is well-fitted and ample stock; good residence, warehouse, and yard; terms; valuation about £700.

Particulars of any of the above will be furnished on application.

N.B.—NO CHARGE TO PURCHASERS.

Other Businesses, Town and Country. Particulars free on application. Personal applicants receive Messrs. O. & Co.'s direct attention and advice, where required, free.

TERMS FOR VALUATION ON APPLICATION. APPOINTMENTS BY POST OR WIRE HAVE IMMEDIATE ATTENTION. Messrs. ORRIDGE & Co. invite communications from COLONIAL and FOREIGN firms where business of a confidential nature requires the especial attention of a London Agent.

SPECIAL NOTICE.—Messrs. ORRIDGE & CO. have a large number of Businesses for Sale, suitable for Gentlemen with Small Capital, from £200 to £500.

ORRIDGE & CO., 32 Ludgate Hill, LONDON, E.C.

TO LET.

SHOP to Let as Chemist's; first-class position; no opposition; plate-glass front will be put in to suit tenant; splendid house; rent £100. Apply Sandon, 327 Harrow Road, N.

TO Chemists and Druggists.—To Let, in a good central position in Dover, a newly-erected Shop, with convenient dwelling-house; very suitable for a Chemist and Druggist, as no such business is at present in the neighbourhood. Apply to Messrs Terson & Son, Estate Agents, Dover.

APPRENTICESHIPS.

APPRENTICE wanted, indoors, in good-class Dispensing and Light Retail business; time allowed for study. J. Gibbs & Son, The Central Pharmacy, Eastbourne.

VACANCY for an Apprentice, affording splendid opportunities for learning every branch, under one of the principals; premium required; references exchanged. Address, in first instance, W., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

F. J. BRETT

Valuer, 60 St. Stephen's Road, LEICESTER.

References to principal London and Provincial Wholesale Houses, also to numerous clients throughout the United Kingdom.

BUSINESSES THOROUGHLY INVESTIGATED FOR BUYERS. 20 YEARS' EXPERIENCE. NO CHARGE TO BUYERS

STOCKTAKING UNNECESSARY.—Stocktaking is always dreaded by Chemists, and with a competent Valuer is not necessary.

F. J. BRETT is prepared to estimate or to value entire stocks as they stand with little or no inconvenience to ordinary business, and has repeatedly done so with entire satisfaction to those adopting this mode.

STOCKS AND FIXTURES BOUGHT FOR CASH.

£720 returns.—**DERBYSHIRE.**—Retail, Prescribing, Dispensing, and Gilbey's Agency; good house, lease; price £400.

£1,000 returns; rising seaport; capable of great extension; price £320.

£250 returns; Branch; fashionable seaside resort, Devon; excellent position; neglected; valuation about £170.

£320 returns.—**LEICESTER.**—Main thoroughfare; few patents; price £125; good chance for man with small capital.

£600 returns.—**STAFFS.**—Established 40 years; General Retail; good opening for Wholesale; valuation about £400.

BERDOE & CO.

CHEMISTS' TRANSFER AGENTS AND VALUERS,

30 JEWRY STREET, ALDGATE, E.C.

Established 1870.

NOTICE TO VENDORS.

Having been for the past 25 years solely engaged in the Sale, Purchase, and Valuation of Chemists' Businesses, we have, as Transfer Agents and Valuers, the largest experience of any in the Trade. VENDORS placing their businesses in our hands for transfer, may in all cases rely upon a speedy sale being effected without undue publicity. Terms forwarded post free on application. No sale, no charge.

BUSINESSES WANTED.

NO CHARGE TO PURCHASERS.

1.—**WEST OF ENGLAND.**—Good-class Retail and Dispensing Business; returns £1,150; handsomely-fitted shop, well stocked; modern house; low rent; price £1,050; worth attention.

2.—**CHESHIRE.**—First-class Retail and Dispensing Business, making a net profit of £550 yearly; handsome corner shop, well fitted and stocked; valuable lease; price £

3.—**HAMPSHIRE.**—Death Vacancy; Retail and Prescribing Business; returns £400; Post-office pays £30; rent £23; good house and garden; price £200; must be sold.

4.—**DERBYSHIRE.**—Retail and Prescribing Business, in small market town; returns £700; net profit over £200; not much opposition; price £400; strictest investigation allowed.

5.—**LONDON, W.**—Light Retail and Dispensing Business; returns £1,400; net profit £450; good house, well-fitted shop; good stock; price £1,100, or offer entertained.

6.—**LONDON, S.W.**—Light Retail and Dispensing Business; returns £1,200; net profit £400; good house and garden; handsome double-fronted shop; price £900, or offer.

7.—**MILE END ROAD.**—Excellent position; Retail and Prescribing Business; returns £600, under management; would do £2,000 as a store; price £400, part could remain.

VALUATIONS.

SPECIAL ATTENTION is paid to Valuations, which are personally conducted by a member of the firm, in any part of the United Kingdom. Our terms, which are moderate, may be had on application.

Berdoe & Co., 30 Jewry Street, Aldgate, E.C.

THOMAS TOMLINSON & SON

Chemists' Consultants, Investigators, Transfer Agents, and Valuers

9 NEW CANNON ST., MANCHESTER,

FORTY-FOUR YEARS' EXPERIENCE.

BUSINESS WANTED.—Thomas Tomlinson & Son, having on their books an extensive list of gentlemen who have entrusted them with commissions to look up a good genuine Business, intending sellers can rely upon being at once with all despatch put into communication with bona-fide buyers without publicity and the annoyance of answering "curiosity" applications. No charge made unless Sale is effected.

INTENDING PURCHASERS will do well to call at our offices and place their names with us, with particulars as to requirements and capital at command, as, having an extensive list of Businesses for disposal, we are able to judge as to adaptability, and to furnish those only suitable. Applicants unable to see us may have our candid opinion by post, without any charge.

NO CHARGE TO PURCHASERS

Telegraphic Address—"TOMTOM."

JUDD & MANNERS,

(SUCCESSORS TO CROCKER & CO.)

Trade Valuers, Transfer Agents, & Accountants,
76 CANNON ST., LONDON, E.C.

(ADJOINING CANNON STREET STATION).

HOME COUNTY.—Old-established Country Retail, returning, at good prices, £1,200 yearly; large and convenient premises, well situate in the centre of a busy market town; price £1,050, or valuation throughout.

KENT.—Old-established Family trade; returns £2,100; price £2,000; net profit £700; most desirable residence, with large garden; held on long lease, at moderate rental.

GLOUCESTERSHIRE.—First-class Country Business; returns over £1,000 yearly; large sale of own Specialities; rent £45; present hands 21 years; single-fronted shop, good house; pleasant locality; price £900.

NORTH OF ENGLAND.—High class Retail and Dispensing; established 35 years; very handsome double-fronted shop; returns £1,450; valuation of goodwill and effects will be accepted

NORTH LONDON.—Cash Retail, Dispensing, and Prescribing trade; returns £850; price £500; double-fronted shop, well fitted, and heavily stocked; fairly good house and garden.

LONDON, S.E.—Light Retail and Dispensing trade; returns over £600 yearly under a manager; price £200; a bargain.

LONDON (West-end).—High-class Dispensing Business, very old-established; returns £1,300, very profitable; price £300 goodwill and valuation; we strongly recommend this as a sound and reliable investment.

BIRMINGHAM.—An old-established Cash Retail and Prescribing trade; returning at full prices £450 a year, under management; price £225.

NEAR LONDON.—Light Retail, Prescribing, and Dispensing Business, with Dentistry; returns £2,000, very profitable; price about one year's returns.

MIDLANDS.—Retail and Dispensing, returning over £500; price £300

YORKSHIRE.—Cash Retail, Dispensing, and Prescribing trade; returns £1,500; price £1,100, or valuation terms can be arranged.

SURREY.—Light Retail and Prescribing trade; returns £400; price £200; good position in main road.

KENT.—Market town; Cash Retail and Prescribing trade; returns £700, at full prices; good house, well situate in main street; price £600.

HOME COUNTY (near London).—Light Retail and Dispensing Business, in first class position for a pushing trade; returns £600; price £400; long lease at low rent.

VALUATIONS PERSONALLY CONDUCTED.

56 Cheapside, E.C.

NEXT DOOR TO

BOW CHURCH.

FERGUSON & OSBORNE
Chemists' Valuers,
TRANSFER
AGENTS,
AND
PARTNERSHIP NEGOTIATORS.

25 Years' Practical Experience.

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BUSINESSES FOR DISPOSAL.

3s. 6d. for 50 words; 6d. for every 10 words beyond.

FOR sale, easy terms, small Light Retail Business, large manufacturing town (Lancashire): well-fitted shop; good position. For particulars apply, Mr. Pickering, Rosebery Terrace, Bryn.

SMALL Retail, with a valuable Speciality; situated in a Midland county; on account of death. Apply, in first instance, to A. G. Pickarby, Esq., Feering Villa, Conduit Road, Abingdon, Berks.

CHEMISTS.—Old-established Business in rapidly increasing suburban town to be disposed of; shop in High Street, and a good position; rent £70. For particulars apply Messrs. Morgan & Baines, Auctioneers, Sutton, Surrey.

SMALL Retail and Prescribing Business in S.E. district to be sold; returns between £5 and £6 weekly; rent £35 per annum, £12 let off; price to immediate purchaser for cash, £135. Address, in first instance, to S., 22 Park Road, West Dulwich, S.E.

A GENUINE Light Retail, Dispensing, and Prescribing Business, now doing, under management, £8 weekly; could be doubled by an energetic man; low rent and good prices. H. W., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

G. W. SARGENT, deceased, 75 Church Street, Kensington, W.—This Business is for immediate disposal. Full particulars may be obtained, and all inquiries respecting same must be made to the Sole Agents, Messrs. Berdoo & Co., 30 Jewry Street, Aldgate, City.

£700.—A Light Retail, Dispensing, and Family Business, situated in good middle-class neighbourhood, London suburb; prominent position, with good house and side entrance; rent low, long lease. 204 B, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

FOR Sale, in one of the largest seaport towns in South Wales, main thoroughfare, a good Prescribing and Retail Business; splendidly fitted, well stocked; proprietor giving up on account of ill-health. "Zeta," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

£20.—For Sale, the vendor being very ill, a Manufactory of Gelatinous Capsules (established 40 years), with all tools and even filling machine making 1,000 capsules per hour. Direct letters—Martell, 6 Rupert Street, Coventry Street.

SURREY (20 miles from London).—A splendid opportunity occurs for young man with £150; nucleus return £5 to £6 weekly; qualified man would double at once; population 7,000; only one other chemist; 8-roomed house, large garden. "Nucleus," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MIXED Retail Business for Sale; good profits; good turnover; low rent; a profitable Prescribing business may be cultivated if desired; pleasant Lancashire town; valuation or offer; must be sold at once; principal's only. Particulars on application, 202 B, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

BIRKENHEAD.—£150; Light Retail and Prescribing Business; returns £371; full prices except patents; capable of much increase; low rent, good house, busy road; shop is well fitted in mahogany; well stocked; bargain energetic young man. "Birkenhead," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

FOR sale, in a large manufacturing town in the West Riding of Yorkshire, the old-established Business of a Chemist and Druggist; returns about £1,200; Wholesale, Retail, and Prescribing; rent low; no Stores; foreign wine licence attached. Address, "Laurel," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

LIVERPOOL.—A bargain, in consequence of continued ill-health of Proprietor; old established Prescribing, Dispensing, and Cash Retail Business; handsome corner shop, in busy thoroughfare; lowest cash price on application; bona-fide purchasers only treated with; references required. Address, "Bottle," c/o Evans & Co., 56 Hanover Street, Liverpool.

PONTYPRIDD, SOUTH WALES.—For immediate disposal, an old-established Chemist's Business in main street, having full licences for wines, spirits, beer, and several good agencies; must be sold on account of death of late proprietor; goodwill required; stock, plant, fittings, at valuation. Apply, Howard & King, Gresham Buildings, Pontypridd.

£200. or valuation if preferred; handsome lock-up Pharmacy, with drug-room, cellar, and yard, in medical neighbourhood; roomy shop; returns average £447 last 4 years; 4,456 prescriptions 3 years; rent £35; exceedingly cheap, but must sell on account of buying larger. Apply, "Velox," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

BY valuation of Stock and Fixtures, or upon agreed price, an old-established Mixed Country Business, no heavy trade, in South-Western county; shop in commanding position, with bold frontage and plate-glass windows, side shop; large house and garden, lawn, &c.; returns £400; rent and taxes low. S. L., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

HAMPSHIRE Seaport.—Thoroughly genuine small Retail and Prescribing Business, well situated in main road, with rapidly growing district; strict investigation allowed to genuine applicants; price, a fair offer will be considered to effect a speedy sale, vendor having purchased another business. Apply, "Chemist," c/o Mr. Layton, 17 Somers Road North, Portsmouth.

CHEMISTS AND DRUGGISTS.—Two genuine little Businesses, situated in thickly-populated Birmingham suburb, for immediate disposal; the shops are nicely fitted, and occupy commanding positions; total ingoing £200 and £120 respectively; would be sold separately; exceptional chance. Harrison & Kinson, Auctioneers, 41 and 42 Temple Street, Birmingham.

FOR immediate disposal as a going concern, the Chemist's Business carried on for over 20 years at 14 Glasshouse Street (corner of Rick Street), Nottingham; rent of house and shop £28; turnover at present poor, but an energetic young man ought to make a very good living; price for everything as it stands £100. Derbyshire Brothers, Chartered Accountants, Nottingham.

BUSINESSES WANTED.

3s. 6d. for 50 words; 6d. for every 10 words beyond.

WANTED, a reliable Retail and Dispensing Business in London; price about £600. Apply, L. J. E., c/o Wright, Layman & Umney, Southwark Street.

WANTED, a good-class Retail and Dispensing Business in London or suburbs, returning about £700, with scope for increase. Apply, 202 B, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, immediately a good-class Country Business, with returns up to £1,000, and capable of increase; must have a fair-sized house; small garden desirable. Address, "Saline," c/o Meggeson & Co., 14 Miles Lane, London, E.C.

A RELIABLE Retail and Dispensing Business in or near London, returning £700 or more, or would undertake the management of a good business with view to partnership or purchase. Replies treated confidentially. J. R. W., c/o Messrs. Newbery & Co., 1 King Edward Street, E.C.

WANTED, a good-class Business (Dispensing and in the Midlands preferred), returning from £1,000 to £1,500; any gentleman wishing to sell in a quiet and bona-fide manner, will find a quick, reciprocal, and cash purchaser. "Integrity," Messrs. Barron, Harveys & Co., Giltspur Street, London.

SALES BY AUCTION.

3s. 6d. for 50 words; 6d. for every 10 words beyond.

By Order of the Executors of the late Mr. RICHARD PARKINSON (for many years Local Hon. Secretary to the Pharmaceutical Society of Great Britain), 1 William Henry Street, Corner of Soho Street, Liverpool.

THOMAS WHITEHEAD & SONS are instructed by the Executors to Sell by Auction, on Wednesday, April 10, 1895, commencing at 11 o'clock, the Goodwill, Shop-fittings, and Stock-in-Trade of a Dispensing Chemist and Druggist (to be offered in 1 lot), and, according to catalogue, the whole of the genuine and superior Household Furniture; Library of Standard Books, including fine copy of Hogarth, 4to; Cunningham's "Burns," 4to; Dr. Taylor's "Scotland," 2 vols., 4to; Manspratt's "Dictionary of Chemistry," "Imperial Dictionary," "Imperial Gazetteer," Hume and Smollett's "England," "Museum of Natural History," Tyrrell's "Russian War," Tyrrell's "Shakespeare," Bunyan, Macanlay's "England," "Land of Burns," Willis's "Canadian Scenery," 2 vols., &c. Valuable London Art Union Prize Water-colour Drawing, "Llangollen," about 44 in. by 20 in. (by W. G. Herdman), and other effects.

The business, which had been carried on with great success for 30 years by Mr. Parkinson, has a good Dispensing connection, and furnishes an excellent opportunity to Chemists commencing practice, or for forming a branch establishment. The shop-fittings are of good old mahogany, and are replete with a well-furnished stock of drugs, such as might be expected to be found in connection with an old-established concern.

On view on the morning of sale, when catalogues may be obtained on the premises, or earlier on application to the Auctioneers, 67 Hanover Street, Liverpool. Telephone 1339.

For other information apply to Messrs. Alsop, Stevens, Harvey & Crooks, Solicitors, 14 Castle Street, Liverpool. Telephone 865.

The Freehold Property will be offered for Sale by Auction at the Law Association Rooms, Cook Street, Liverpool, on Tuesday, April 9, at 2.30 p.m.

FOR SALE.

3s. 6d. for 50 words; 6d. for every 10 words beyond.

FOR Sale, 250 Druggist's Shelf Bottles and Jars; various sizes and shapes, labelled. Apply, Mr. Sheldon, Auctioneer, Rotherham.

PARTNERSHIPS.

3s. 6d. for 50 words; 6d. for every 10 words beyond.

ADVERTISER is open to negotiate for the Purchase of or Partnership in a good-class Provincial Retail and Dispensing Business, situated in a healthy locality: no agents. Address replies, which will be regarded in the strictest confidence, to "Major," c/o Messrs. Barron, Harveys & Co., Giltspur Street, London.

SITUATIONS OPEN.

3s. 6d. for 50 words; 6d. for every 10 words beyond.

WANTED, an active Junior; indoors. Apply, "Radix," c/o Messrs. Sanger & Son, 2 Winsley Street, Oxford Street, W.

WANTED, a competent Assistant, with knowledge of Photography, to manage a small branch. J. W. Black, Sydenham.

WANTED, an Improver or Turnover, in good-class Dispensing business. Apply, Allen & Lloyd, 59 High Street, Aldershot.

QUALIFIED Assistant; indoors. State age, references, salary required, to R. H. Beverley, Chemist, 128 Derby Road, Nottingham.

SMART, active Assistant, with good address; aged about 24; indoors; must be steady and reliable. Send full particulars, G. W. Worfolk, Ilkley.

JUNIOR, at once; indoors; steady and obliging. State age, height, references, salary required, with photo, if possible (to be returned), R. Lemmon, Hythe, Kent.

PACKER and Storekeeper wanted at once; must be conversant with Drugs, Sundries, and Patents. Apply, Parke's Drug Stores (Limited), 21 Princes Street, Oxford Street, W.

JUNIOR Assistant for Drug side, in a good-class Mixed country business. Apply, with full particulars and salary required, to W. G. King & Son, Chemists, Market Drayton, Shropshire.

WANTED, immediately, a qualified Dispenser; also a smart Junior for a brisk business; light hours; no Sunday duty or Bank holidays. Apply, W. Burrows, 243 Brompton Road.

WANTED, a Traveller, having other commissions, calling on Chemists, Grocers, and Stores, to sell some Specialities on commission. J. P., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

GOOD Junior wanted for good Mixed business; one accustomed to Post-office preferred; highest references given and required; indoors. Fred Barlow, Chemist, Balsall Heath, Birmingham.

WANTED, at once, an energetic and trustworthy Assistant, capable of managing a Branch; indoors. State age, height, references, and salary, to M., c/o Messrs. Meggeson & Co., 14 Miles Lane, E.C.

WANTED, at once, a smart Junior Assistant, aged about 23 years; accustomed to good Retail and Dispensing business. Apply, giving full particulars, to Gignier & Co., 131 King's Road, Chelsea, S.W.

WANTED, middle of April, a qualified Assistant (indoors), about 23; must be energetic and accustomed to good-class Retail and Dispensing. Apply, Edward Wavell, 144 Victoria Street, London, S.W.

WANTED, an active Junior Assistant, of Christian principles, for brisk business; Photography, or ready to acquire knowledge; half-holiday weekly. Apply, W. Greig, A.P.S., 591 Old Kent Road, London.

ASSISTANT, about 23, indoors, for Retail, Prescribing, and Dispensing business; Extractor preferred. Address, with full particulars, enclosing photo, Pretty, 235 North End Road, Walham Green, S.W.

MESSRS. J. KEMP & CO., Chemists, Lincoln, require a Junior Assistant, aged about 21, who has been accustomed to a good-class General business. State full particulars in first letter, and enclose photo.

TRAVELLERS having connections with Grocers and Chemists in London and suburbs, will hear of a commission for a staple article by applying by letter to H., at G. H. Farrington, 31 Watling Street, London, E.C.

THOMAS G. STONHAM & SON, Maidstone, require a qualified Assistant, aged about 24; must have had experience in good-class Dispensing and Retail. Apply by letter, stating full particulars, age, height, and salary expected; enclose photo (to be returned).

WANTED, at once, a good Junior, used to first-class Dispensing, in Country business; outdoors; time for study. Apply, stating all particulars, with photo (which will be returned), to A. Althorp, Chemist, Woking.

ASSISTANT wanted for middle of April; good Dispenser, and used to making Pharmaceutical Preparations; indoors. Apply personally preferred, R. C. Harrison, Pharm. Chemist, 3 Eltham Road, Blackheath, S.E.

QUALIFIED Manager for Branch, to live on premises; must be obliging to customers, energetic, of good appearance and address; one accustomed to Store trade preferred. Cooke & Co., Chemists, Boston, Lincolnshire.

WANTED, a qualified Assistant; indoors; must have first-class references and be a good Prescriber. Apply (in first instance), stating experience and salary required, to Smith & Sons, Wholesale Druggists, Norwich.

WANTED, at once, smart Junior Assistant; one used to Mixed country business and capable of being left in charge. Apply, giving full particulars, and enclosing photo (which will be returned), to Fowke & Son, Stafford.

DEVONSHIRE; outdoors; a Junior Assistant, aged 20 to 22, accustomed to good country Retail business. Apply, with full particulars, stating salary required, to W. Jackson & Son, Pharmaceutical Chemists, 10 High Street, Crediton.

WANTED qualified, energetic Assistant as Branch Manager; one accustomed to Cash Store trade preferred, also knowledge of Photography. Send photo, references, and salary required, to John B. Foggitt, Pharmacist, Southport.

WANTED, for a small business in the country (Scotland) a registered Chemist; wages 35s. per week; one who has a knowledge of the Wholesale trade preferred. Apply to B., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

IMMEDIATELY, Junior or Improver, about 21, for putting up Stock and general Cash Retail; must be industrious and obliging; good references; outdoor apartment provided. Reply, by letter only, Lockhart, 182 Wardour Street, W.

QUALIFIED Assistant, as Manager Branch business, in busy locality, main road; capable and energetic; good references required; outdoors; salary and commission. Write, stating age, salary, and previous experience. Lockhart, 182 Wardour Street, W.

OUTDOOR Assistant, about 23, for brisk Retail and Prescribing business; permanency to a suitable man; single. Apply, with full particulars, age, height, experience, and salary required, enclosing carte, to Cartwright, 69 Leytonstone Road, Stratford.

WANTED, Locum (immediately), qualified, for a few months; outdoors; moderate hours; every other Sunday evening duty; new business, just started. Apply personally, with references, to Mr. Pagie, 49 Bernard Street, Russell Square, between 10 and 12 noon.

INDOORS; Junior or Improver, immediately, for Dispensing, Light Retail, and Agricultural business; abstainer; state age, height, salary, experience, and references, also enclose photo (to be returned). Address, E. Guy, 27 and 28 Eign Street, Hereford.

MANAGER wanted for Store in South of London, with good-class trade; married; qualified; an energetic and capable man of good appearance liberally dealt with; one with R.D.S. or a good Extractor preferred. Write, "Boz," 159 High Road, Balham.

TRAVELLER for India, with good experience of the Drug trade and of the Indian market, to Represent one or more Agencies. Apply, by letter, stating experience, qualifications, and terms required, to T. U. 177, Deacon's Advertising Offices, Leadenhall street.

AT once, a qualified Assistant, accustomed to good-class Retail and Dispensing; indoors; abstainer preferred. Please apply personally, or if by letter, state reference, salary required, and usual particulars, and enclose photo, to Atkinson, 25 Westow Hill, Upper Norwood, S.E.

WANTED, a Dispenser, between hours of 9 A.M. and 10.30 A.M., sometimes 11 A.M., and 4.30 to 8.30 P.M.; stipend £1 per week; one who can occasionally assist with patients preferred, for which extra remuneration. Apply, "Medicus," 50 Bellevue Road, Southampton.

WANTED, a qualified Assistant about 24 years of age with good address, and energetic, for a good-class Dispensing and Retail business; apply, with full particulars, previous engagements, salary required, &c., enclose photo, Foster Blades, 10 Gloucester Road, South Kensington.

JUNIOR Invoice Clerk wanted in the office of a Manufacturing Chemist and Wholesale Druggist; must be quick, industrious, and write a neat and legible hand; some slight knowledge of the trade indispensable. Apply by letter, stating age, qualifications, and former experience to D., c/o Messrs. Dawson & Sons, 161 Cannon Street, E.C.

AT once.—Wanted, a smart, energetic, and trustworthy Assistant (requiring permanency) to manage small Retail Branch; must be a good Prescriber and Extractor; one qualified and with knowledge of Photography preferred. Write, stating age, experience, salary (outdoors), and full particulars (enclosing photo and references), to "Chemicus," 3 Hainton Terrace, Grimsby. Also Apprentice (outdoors).

WANTED, immediately, a smart Assistant (single), to take charge of a branch business; furnished apartments only found, no board. Set salary, age, height, whether able or not to extract teeth, with whom last and how long, if photo send (will return), or personal application preferred between 12 and 1 or 5 and 6, at Morris, Chemist, 23 West Green Road, Tottenham, London, N., close to Seven Sisters Great Eastern Railway Station, and near South Tottenham Station, *via* King's Cross. Junior also wanted.

SITUATIONS OPEN—Cont.

ASSISTANT, about 21 or 22, who has been accustomed to a good-class Dispensing Business. W. H. Webb, The Central Pharmacy, Weston-super-Mare.

WANTED, at once, a Junior or Improver, for a City business; one accustomed to a Wholesale as well as Retail preferred. Apply, C. H. Warner & Co., 55 Fore Street, E.C.

WANTED, a Junior Shipping Clerk, aged about 21, with knowledge of the Drug trade. Apply, by letter, stating experience, to J. B., 423, c/o Messrs. Deacons, Leadenhall Street, E.C.

ASSISTANT wanted (qualified), in high class Modern business; must be good Counter-hand; send usual particulars; indoors. W. Aston, Pharmaceutical Chemist, 21 Montague Street, Worthing.

MANAGER (single), aged about 25 to 30, wanted, for a small business; indoors; qualified; salary £35 per annum. Address, W. B., Office of THE CHEMIST AND DRUGGIST 42 Cannon Street, E.C.

WANTED, after Easter, an outdoor Assistant, as Counterman in a brisk ready-money business. Apply, with photo, stating age, height, and experience, to E. J. Kitson, The City Drug Stores, Worcester.

QUALIFIED Junior, about 23; must be quick and accurate in Dispensing, and good Counterman. Apply (by letter first) to Lawrence & Co., Chemists, 125 St. John's Hill, New Wandsworth.

WANTED Assistant (Minor) to manage Branch; aged about 26; good experience essential; if with small capital Partnership entertained. Address "Ezra," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, immediately, a Junior Assistant, about 23, in a Light Retail and Dispensing business. Apply, stating age, height, and salary required, enclosing photo, to A. H. Adams, 21 Fornosia Street, Maida Vale, London, W.

IMMEDIATELY, a steady, trustworthy Junior, of good appearance and address, accustomed to country trade. Apply, stating age, height, salary (indoors), and references, to T. Brown, Pharmaceutical Chemist, Lutterworth, Leicestershire.

MANAGING Assistant for country business; qualified; must be capable and energetic. Send photo, experience, and references, and state salary required (indoors), to "Branch," c/o Evans, Lescher & Co., 60 Bartholomew Close, London.

WANTED, at once, a Junior, Improver, and Apprentice (indoors) for a thorough good country business in Kent. Apply, with all particulars, F. O., c/o Messrs. Wright, Layman & Umney, Southwark Street, London. Send photo, if one at hand.

JUNIOR; permanent; indoors; active and quick; possessed of a good character and memory; photo (to be returned). Would also like to hear from a qualified man who has a few hours weekly to spare. Address, 204/38, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

UNQUALIFIED Assistant wanted, for quick Cash, purely Chemist's trade; state remuneration (outdoor), and full particulars as to age, experience, &c., and enclose photo (to be returned); reasonable hours. "Quinine," c/o Messrs. Wright, Layman & Umney, Southwark Street, S.E.

IMMEDIATELY: capable young man, to take charge of a small Retail and Prescribing Business for widow, in Yorkshire town; indoors. Apply, stating age, height, salary, and other particulars (enclosing photo), to 204/29, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

ASSISTANT (immediately), reliable (outdoors), aged about 23, single, for a good country Retail, Dispensing, and Agricultural business; neat and active Counterman; moderate hours, no Sunday duty; close Wednesdays 4 P.M.; apprentice kept. Apply, stating age, height, references, salary, carte (returned), to W. Boor, Wisbech.

CHEMIST (qualified) wanted at once to manage Store Branch in Edinburgh; must have had experience, and be good Counterman and Dispenser; liberal salary and commission to one who can push business; capital opening for active man. State experience and salary desired to No. 6766, Scotsman Office, Edinburgh.

JUNIOR Assistant required immediately for a few months in a first-class business in a pleasant country town; light hours, and weekly half-holiday; must be gentlemanly in appearance and of good address. Apply, enclosing photo, also stating age, height, and salary expected, to George Averill, Pharmaceutical Chemist, Rugeley.

MANAGER for a Branch, conducted on Store lines, to live on the premises; another Assistant retained; an energetic, pushing gentleman, thoroughly well up and qualified, will be liberally dealt with; one with "Store" experience preferred. Full particulars of engagements, age, and salary required, to "Chemist," 510 Hornsey Road, Hornsey Rise, N.

QUALIFIED Assistant required shortly; moderate hours; must be competent and quick; state salary required (outdoors), periods of service in last two or three situations, and usual particulars; permanency, with good prospect of advancement for a suitable Assistant. Apply, in the first instance, to "Litmus," c/o Messrs. Maw, Son & Thompson, Aldersgate Street, E.C.

SUNDRIES.—Wanted, by one of the largest firms of Wholesale Druggists in Ireland, experienced Manager for Sundries Department; must have knowledge of surgical instruments, packed drugs, proprietaries; married preferred. Reply, stating age, salary expected, and enclosing copies testimonials, 202/12, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MANAGER.—Smart, energetic man of business, qualified (single preferred), for a first-class country business (Midlands); other Assistants kept; must be a good Salesman, Prescriber, and well up in Agricultural trade. Apply, with full particulars of experience, carte, state age, height, and salary required, to Edward C. Perks, 1 Sloane Square, London, S.W.

WANTED, immediately, for a Light Retail and Dispensing business, an outdoor unqualified Assistant; tall, of agreeable manners, and otherwise thoroughly competent and reliable; one well up in Dentistry, Extractions &c., preferred; salary 30s. weekly and furnished room over shop; recent references indispensable. Doctor Gleeson, 28 Shepherd's Bush Green, London, W.

TWO qualified gentlemen required to join a sound undertaking as Managers; must by themselves or friends invest £100; a safe and profitable investment, free from liability, with substantial remuneration; also an Assistant; and Youth, with knowledge of the trade, not afraid of work, to make himself useful. "Stores," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

BOARD AND RESIDENCE.

SUPERIOR Apartments for students; good combined rooms; use of dining-room or sitting and bed rooms; full or partial board; terms moderate; house of chemist's widow; no children; bath, hot and cold; 5 minutes to tram, bus, train; 1d. fare to Kennington colleges; references to former students. W., 39 Salton Road, Brixton.

SITUATIONS WANTED.

1s. for 12 words; 6d. for every 6 words beyond.

JUNIOR or Dispenser; 23; whole or part time. R. B., 11 Bellevue Road, Sunderland.

ADVERTISER seeks part-time or evening employment. "Statin," 560 Commercial Road East.

ASSISTANT, qualified; 24; tall; disengaged. "Cortex," 16 Wansey Street, Walworth Road, S.E.

LOCUM-TENENS: early arrangements will be esteemed a favour. Provost, Castlegate, Grantham.

WHOLESALE or Export, Wet or Dry; experienced. Forbes, The Village, Tarland, Aberdeenshire.

LOCUM-TENENS; aged 28; disengaged; Extractor. 2 Horton Street, Lewisham, London, S.E.

IMPROVER: 19; used to Country Wholesale; experienced. Bent, 2 Northampton Street, London, N.

NO SALARY.—Lady as Improver. X. Y. Z., c/o Sub Librarian, Literary Society, Tunbridge Wells.

DISPENSER to Surgeon; temporary or otherwise. "Dispenser," 20 Stonestreet, Tollington Park.

WHOLESALE.—Forwarding Clerk, or Wets, Drys, Sundries. "Cortex," 13b Dufferin Street, E.C.

LOCUM-TENENS; varied experience; moderate. J. Newcombe, 54 Gloucester Road, Bishopston, Bristol.

ASSISTANT; country preferred; good references. "Disengaged," 47 Evershot Road, Tollington Park, N.

ASSISTANT: 23; 7 years' experience; unqualified; outdoors. M., 72 Saltram Crescent, West Kilburn, W.

LONDON or Country; locum or permanent; qualified. "Chemist," 12 Goldington Crescent, St. Pancras, N.W.

LOCUM: qualified; disengaged; 28; first-class experience; highest references. "Sigma," 30 Paris Street, S.E.

AS Dispenser or otherwise; 29; qualified; outdoors; best references and experience. A. S., 118 Branchfarms Road.

RE-ENGAGEMENT as Branch Manager, or otherwise; fully competent; unqualified. F. R., c/o Plant, Sidcup.

ASSISTANT or Manager; single; aged 30; Minor. "Omicron," Chemist, Southgate Place, New Southgate, N.

EXPERIENCED Assistant; willing to give part time or in emergency. Davis, Chestnuts, Gordon Hill, Enfield.

SITUATIONS WANTED—Cont.

ASSISTANT; aged 24; disengaged; in or out doors "Radix," 50 Tillingham Street, Sparkbrook, Birmingham.

AS Junior; 24; good reference; Camden or Kentish Town preferred; unqualified. "Chemist," 2 Osney Crescent, N.W.

MANAGER or Assistant; 29; good experience and references; outdoors. H., c/o Morris, Southbury Road, Enfield, N.

ASSISTANT; 24; unqualified; 7 years' experience; disengaged. "Sulphonal," 13 Sydenham Terrace, Southsea, Hants.

ASSISTANT; 24; 9 years' good town and seaside experience; unqualified. D. Thomas, 174 High Park Street, Liverpool.

WANTED, situation, by young man in Wholesale Sundries or Patents House as Salesman. P., 141 High Road, Balham.

IMMEDIATELY, as Locum-tenens or permanent; moderate salary; satisfactory references. "Rhe," c/o Oliver, New Eltham.

MANAGER, Locum, Assistant; successful Prescriber, Extractor; abstainer; married. B., 17 Stafford Road, Brixton, S.W.

IMPROVER in good Dispensing business; 2½ years' experience; salary or board and lodging. S., 175 Uxbridge Road, London.

QUALIFIED; aged 30; outdoors; temporary or permanent; first-class experience, City and West-end. C., 129 Camden Street.

SENIOR or Manager; qualified; first-class experience in town and country; aged 35. "Minor," 22 Chantry Road, Brixton S.W.

MANAGER, Assistant, or Dispenser; temporary or permanent; 45; varied experience. T. J. C., 13 Guildford Street, Farringdon Road.

MANAGER of small branch; 7 years' London experience; good references. "Major," c/o Williams & Peters, 165 Fortress Road, N.W.

LOCUM or Junior; 23; 5 ft. 6 in.; unqualified; 9 years' experience; liberty April 8. Wild, 38 Linnet Lane, Sefton Park, Liverpool.

JUNIOR; neat and accurate Dispenser, good Counterman; used to good-class Cash business; unqualified. H. A., 2 Spencer Terrace, Putney.

POSITION of trust with prospect of advancement; good and varied experience; 33; satisfactory references. "Lex," 37 Market Place, Driffield.

MANAGER; married; qualified; aged 28; 12 years' experience; disengaged April 9th; good references. Ferguson, 114 King Street, Southsea.

BOOKS posted, Accounts kept or collected, by experienced Clerk; part or full time; evening engagements undertaken. J., 4 Portobello Road, W.

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PILL-MAKER: Wholesale; 5 years'; good Coater. L., 66 Upper Berkeley Street, W.

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ASSISTANT; 24; disengaged; Locum or permanent. Cannell, 37 Vassall Road, Brixton.

ASSISTANT; 22; outdoors; good experience. Seabrook, 26 Whitley Road, Upper Norwood.

MANAGER or Senior; London or Seaside preferred; experience d. "Obem-it," 179 Hampstead Road.

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MANAGER or Senior; qualified; married; disengaged; West-end and provincial experience; good references. Address, Wilson, 2 Richard Street, Pinnerfield Road, Wakefield.

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"THE CHEMIST & DRUGGIST"

For MARCH 30, 1895.

A particularly good Number, containing many interesting and valuable Articles.

SUMMARY OF CONTENTS.

TWO little girls, daughters of a Bristol chemist, were killed in the gale last Sunday by the falling of a tree (p. 442).

THE Select Committee of the House of Commons on the Early Closing Bill has met twice since our last, and has taken the evidence of several secretaries in its favour (p. 442).

A PHARMACY ACT suit has been heard at Carnarvon, in which it is alleged and denied that a firm of grocers sold a bottle of Fellows's syrup. The decision has not yet been given (p. 454).

ELEVEN London pharmacies have been amalgamated into a limited company, under the title of Lewis & Burrows (Limited). It is stated that the public have over-subscribed for the ordinary shares (pp. 456 and 458).

A CHEMIST at Torquay has been fined 7s. 6d. for keeping boxes and hampers on the public footpath, and a chemist at Carlisle has been fined 2s. 6d. for having unstamped weights and inexact scales in his possession (p. 442).

IF a horse comes through a chemist's window, it appears to be doubtful whether the owner of the horse is liable for damages. A case at Liverpool is reported on p. 455, in which the Lord Chief Justice's remarks are of importance.

THE Greenock Sheriff Principal has, on appeal, confirmed the decision of the lower Court in the action brought by a Greenock druggist's assistant against a local doctor for slander. The Court considers it proved that the plaintiff passed his Preliminary examination by proxy, which was part of the alleged slander (p. 455).

IN our Correspondence columns schemes for the prevention of cutting are condemned, Mr. E. G. Clayton disclaims the statements printed in *Tit Bits* as coming from him, several writers point out that the Post Office does not interfere with early closing, and we have more information regarding the Pharmacist in Fiction (p. 472).

WE publish the results of a number of contracts for drugs, &c. (p. 441).

WE print some interesting practical notes by Mr. Wokes, of Liverpool (p. 453).

OXYGEN and nitrogen are each composed of two gases, so Ramsay and Baly suppose (p. 452).

EDINBURGH chemists have agreed to appeal to doctors in regard to prescribing proprietary medicines (p. 444).

IN his Pharmacopœia paper Mr. Helbing discusses the principles which should guide the authorities in officialising new remedies of chemical origin (p. 463).

PHARMACOPEIA revision has been dealt with at the evening meeting of the Pharmaceutical Society in Edinburgh (p. 446), and by Mr. Brodie at Glasgow (p. 453).

TECHNICAL education was the subject of a speech by Professor Atfield at Watford (p. 440), and Mr. A. J. Balfour spoke on it at the Chemical Society's dinner (p. 450).

MR. SARGENT, the eccentric Kensington chemist who wrote pseudo-official letters to the trade, has died under suspicious circumstances, probably starvation (p. 440 and p. 460).

SOME further information is given regarding crystallised glycerine, which was first observed in 1867. We show that the crystals can be grown at the normal temperature (p. 461).

OUR Trade Reports mention a slight tendency towards improvement in the drug and chemical markets. Changes of price in an upward direction have occurred in several Chinese and Japanese articles, but in one or two other important drugs, notably opium and cod-liver oil, the tendency is all the other way.

AT the anniversary meeting of the Chemical Society Lord Rayleigh was presented with the Faraday medal, and Professor Ramsay announced the discovery of helium, an element lighter than hydrogen (p. 449). Helium is also referred to on p. 459 in connection with argon, the two having been obtained from the mineral cleveite.

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180